

# The Boston Medical and Surgical Journal



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January 19, 1922

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## Original Articles.

### OBSERVATIONS ON THE OPERATIVE TREATMENT OF EPILEPSY, WITH A REPORT OF FOURTEEN CASES.\*

By JOHN MASON LITTLE, M.D., BOSTON.

RECENTLY there has appeared a paper<sup>1</sup> adversely criticising the operative treatment of epilepsy, and saying among other things that "the results of operation, to say the least, are unsatisfactory;" but the benefit sometimes derived from operation has been observed and recorded for a very long time. Whatever the real meaning of the trephining which was done in pre-historic times, as shown for instance by the skulls in the collection in the Warren Museum of the Harvard Medical School, it seems not far-reached to suspect that this was done with therapeutic intent, possibly following observation of the results of accidental wounds received in battle. Taking these as a starting point there is continued evidence of attempts to cure epileptics by operations on the skull. There is evidence that these were regarded as beneficial in the cases where repeated trephinations were done as<sup>2</sup> in the instance quoted by Dr. Duncan Eve of Nashville, who in criticising a paper on "The Surgical Aspect of Epilepsy" reminded us that Chadburn was said to have trephined Philip of Nassau twenty-seven times for the relief of epilepsy. Coming

down to more modern days, it is evident that the subject has interested many surgeons and there was good reason to hope that, under the improved methods possible with anesthesia, asepsis, and cerebral localization, better results would be obtained. In looking over the literature, however, one is impressed with the fact that most of the cases cited are reported shortly after operation and that the claims made do not coincide with what seems to be the consensus of opinion as to the efficacy of operative procedure.

The discouraging fact is that the etiology of epilepsy is obscure and that we know so little about its real causes and pathology. The theories are many but cannot be proved. We know that many procedures or lines of treatment will ameliorate symptoms and seemingly cure, at least temporarily, some forms of epilepsy. Leaving out the medical and psychological factors we know that almost any operative procedure may have some effect. The result of operations such as<sup>3</sup> amputations<sup>4</sup>, operations on the intestines, or<sup>5</sup> operations on the pelvic contents in more recent literature are sufficient proof of this. The recorded cases of cure from various traumatic accidents, including severe burns, and the results sometimes of infectious disease are all proof that almost anything may seem to cure epilepsy. But in almost all these reports one would have liked to know the later histories of the cases. The enthusiasm of the surgeon should be tempered by such consideration but I see no reason why we should discount the evidence or the belief that operative

\* Read before the Waltham Medical Society, May 5, 1921.

procedure may be helpful. Certainly we should not be restrained by timidity or by the safety which attends the conservative and medical methods of treatment. These are indeed well tried, and it is to be hoped that medical methods will in the future be found more efficacious than they are at present. On the other hand this pathetic and hopeless class of patients should not be denied any benefit which may be had from surgical procedure.

The subject of epilepsy is a fascinating one as the great amount of literature published in late years tends to show. The following quotation, slightly altered, from "Pagan and Christian Creeds,"<sup>16</sup> aptly fits the present discussion. "The great difficulty to-day in dealing with the subject, lies in the very mass of the material to hand, and that not only on account of the labor involved in sorting the material, but because the abundance itself of facts opens up temptation to a student in this department of study (as happens also in other branches of general science) to rush in too hastily with what seems a plausible theory. The more facts, statistics, and so forth, there are available in any investigation, the easier it is to pick out a considerable number which will fit a given theory. The other facts being neglected or ignored, the views put forward enjoy for a time a great vogue. Then inevitably, and at a later time, new or neglected facts alter the outlook, and a new perspective is established. The subject of epilepsy is complex, and yields many aspects for consideration. It is only, I think, by keeping a broad course, and admitting contributions to the truth from various sides, that valuable results can be obtained. It is absurd to suppose that in this or any other science *neat systems* can be found which will cover all the facts."

I intend in this paper to give the history of cases I have treated by operations upon the head for epilepsy, with such observations as occur to me. One of our difficulties in the discussion as to the worth of such procedure is that we have not the experience recorded in detail of a sufficient number of cases, nor their subsequent history for a long enough continued period, nor from men whose interpretations are not biased by early enthusiasm, or insufficiently prolonged observation. It is with the object of adding the evidence of some cases that the following are offered. The aggregate of many such reports, if honestly made, and if the cases are followed long enough, should enable us to clarify our views as to the operative treatment of epilepsy. I do not intend to discuss the various forms of epilepsy but shall report something of what has interested me in each case.

The following cases were done under somewhat unusual circumstances in that among the people where they were performed there is practically no other treatment possible, that

is to say, there is no institution whatever for the treatment of epilepsy or chronic disease of any kind; general knowledge and medical information are primitive, as are the habits as to food and general living conditions. In Newfoundland and Labrador it is practically impossible to treat an epileptic according to any rational medical ideas, so that aside from the giving of bromide without supervision, one is helpless. If a case came to me it had to be either condemned to its probably hopeless course or something immediate had to be done. Owing to this I felt justified in performing operations which would not perhaps be backed up by the conservatism of more advanced communities. I plan to report these cases, with the exception of three cases of the Jacksonian type, in the order in which they came to me, giving reasons for whatever procedure was adopted, and giving the result ascertained and the date that such information was obtained and how. I include at the end of the paper the tabulated list of such operative cases as I have been able to find in looking over the literature somewhat superficially back to the year 1906, together with the type of case, type of operation performed, reported result, and lapse of time after operation of the report.

CASE 1. (Hosp. No. 326) St. Anthony Hospital. Female, single, eighteen years of age. Admitted to hospital, March 25th, 1909. *Family History.* Her mother died of cancer. One brother died of tuberculosis. No history of alcohol or syphilis. *Previous History.* Except for scarlet fever and diphtheria in early childhood, the patient had always been well. The catamenia appeared at fifteen years of age and have been normal, but about the time they arrived she had her first attack of unconsciousness which lasted about an hour. In this attack she had no trouble with her hand and before this she had never had an attack of any kind whatever. Following this first attack she would have an attack about every month but not connected in any way with her periods. After these attacks her right arm would feel tired but her people had never noticed any contractions in it during the fits. About three years ago the attacks began to occur two or three times a week and her right hand was affected, the arm being drawn up and stiff. She had an aura which consisted in a "little aching, queer feeling" in the fore and middle fingers of the right hand. The attacks increased in number and severity so that they had been coming recently on an average every three or four days, and a year ago the right leg, and later the left leg and arm became involved.

*Present Illness.* Twenty-eight hours before I first saw her she had fallen on the floor of her own house and was found unconscious with her legs and arms in spasm. She was given an enema and ordered to the hospital, where she arrived twenty-four hours later in

the same condition. Two hours after reaching the hospital she recovered completely and seemed none the worse except for feeling a little tired. She was kept six days in the hospital without having a fit and was sent home but returned in six weeks, having had a series of like attacks though not so prolonged.

Physical examination showed her to be a well developed and nourished, bright, healthy looking girl. She is right handed. The chest, abdomen, and genitals normal. Reflexes normal. Eyes normal. Pupils regular. Ophthalmoscope showed normal grounds and discs. She seemed mentally rather above the average, being bright and sharp. Examination of shaved head showed no scars. No tender region on skull.

While in the hospital she would lapse into unconsciousness two or three times a day for periods of from five minutes to an hour. She would recover from these attacks and experience no ill effect except that she felt tired. As observed an attack was as follows: She was sitting up in bed, leaning against the pillows, and I was talking with her. Suddenly the fingers on the right hand twitched, her head fell back on the pillows, the eyes remained open but vacant looking. Her hand and arm on the right became rigid, and then the leg on the same side. All the muscles were affected, the arm being bent up and the leg extended. The pupils were equally dilated and very slow in response to light. I took her left hand, the one as yet unaffected, and asked her to squeeze my hand if she understood, and she did so. Then I asked her to move her left foot and she did so. I told her if her head ached to squeeze my hand which she did. I asked her to move her eyes, to stick out her tongue, to move her right hand and foot but she could not. I told her if she heard me to squeeze my hand twice which she did. After waiting a minute I asked her to squeeze my hand again but she did not. In a few seconds the left hand and arm became rigid and then the left leg. She was breathing quietly and her color was good. She remained thus rigid for about half an hour when she sighed and smiled at me. One could see that consciousness had returned. The spasm had left the left leg and arm but the right leg and arm were still in spasm. Asked if her head ached, she said, "Not now." She stated that she had heard and understood me in her fit even after she had lost power to contract the left hand, but after that she remembered nothing until, as she said, "My eyes began to see you again when I came to myself." No headache remained nor pain in the right arm which was still spastic, the right leg having now become normal. The spasm of the right arm remained for twenty minutes, then it suddenly left, and though she said she felt a little tired she felt no other ill effects. Such was a typical attack. There was a difference in the length and dura-

tion of the phases but she was having three or four fits daily which almost all became general. They all started with the queer sensation in the fore and middle fingers of the right hand and followed the same sequence. Owing to the increasing severity and frequency of the attacks and their focal character it was decided to operate. Operation was done on April 12th, 1909. Morphine Gr. 1/4 was given sub cu. before being brought to the operating room, where the topography was marked after measurement in the usual way. Light chloroform anesthesia was used. After scrubbing with soap and water followed by alcohol, an incision was made down to the bone with the idea of turning down a bone flap to uncover the motor area. A hole was made through the skull with a Doyen drill but as the skull seemed pathologically thick and very hard the plan was abandoned. The scalp flap was turned down and the opening in the skull enlarged with bone cutters. The dura was found very adherent and had to be carefully separated to prevent undue hemorrhage. The opening in the skull was made two and a half inches from before backward and one and a half inches from above downwards. There was bulging of the dura and no evident pulsation. The dura was opened by a crucial incision, the pia and brain beneath looking very wet and oedematous. No chloroform was given after the bone was removed. Stimulation of the cortex was attempted but we had only a hand made friction machine and, as I found later, the wrong form of electrode and no response was elicited. Over what I conceived to be the center of the arm area, the Rolandic fissure having been identified, I thought the brain tissue looked a little discolored. Explorations in all directions failed to discover any other pathology. The pia over the apparent discoloration was opened and the cortex examined both by sight and touch but nothing definite could be found. The brain cortex bulged a little through the opening in the pia and this bulging cortex I scraped away. I then cut the dura away to within a quarter inch of the bone edge all around the opening. Bleeding points in the brain substance were tied with very fine catgut. The brain was bulging by this time to the level of the outer table of the skull and pulsation had returned. There had been an escape of cerebro-spinal fluid. The skin flap was replaced and sutured with interrupted S. W. G. stitches, a small rubber drain being left at the lower posterior angle leading to the spot where the brain tissue was removed. The general condition during the operation had been excellent and there had been no muscular spasms. A pad was placed over the flap, dry dressing and bandage applied, and the patient put to bed in good condition.

The patient made a good recovery from the chloroform, vomiting only a few times, had

some headache, and passed a somewhat restless night. The following day the patient was in good condition; the right hand was partially paralysed. The dressings were changed, the wick being removed. On April 15th, three days after the operation, my notes show that the patient was on house diet with no headache and from that time convalescence was uninterrupted. The hand gradually lost all feeling of weakness, and by the tenth day, when the stitches were removed, all motions of the hand were well performed. The wound healed by first intention. Pulsation had been marked since operation with bulging in the decompressed area. The patient was kept in bed for four weeks and was given bromide grs. 10, three times a day. The scalp over the area where the skull was removed had gradually receded below the surface of bone and pulsation seemed normal. On May 8th the patient was walking around, very happy and bright, working as much as she was allowed to in the wards, and seemed well in every way, having had no suggestion of any fits or spasms. A week later she returned home with advice to continue the bromide for some time. On May 28th (forty-six days after operation) she was seen at the home of her brother where she was living and doing the housework, perfectly well in every way. In two years after the operation, during which period she had had no medicine except for the first two months, she appeared perfectly healthy and well. Her own statement was, "I feel a lot better. I don't feel my head bad the same as I used to. I haven't had the 'weakness' since the last two years. I haven't had no more attacks and I don't get tired so much." Her weight had increased from 97 lbs. to 109 and a half lbs.

**Final Report.** This patient has lived since the operation within eight miles of the Hospital. She has married and has two children. She has been seen at intervals by the doctors and nurses of the Hospital. During a period of six months in which she was a servant at the hospital, some two or three years after the operation, she stole from some of the hospital people. Whether this was a change in character it would be difficult to state but she has since then returned to her own environment and lived her usual life. My last report was from Dr. Charles S. Curtis, who saw her shortly before December 23rd, 1920, and who states that she feels well, her head does not bother her at all, and she has not had a fit since the operation. From the time of the operation to the time of this last report is eleven years and a half.

**Remarks.** The above case seems one of so-called Jacksonian epilepsy, with all the classical symptoms of well defined aura, the progressive involvement of different areas, continuing into a general attack, gradual progression in the number and severity of the attacks leading

up into status epilepticus, and it seemed hard to believe that a fatal result was not imminent. This is the type of case in which it is generally agreed that operation is advisable. Owing to poor electric equipment, localization could not be made at the time of operation and the operative procedure was somewhat blind. There was just enough evidence of local discoloration to indicate localized pathology. It is unfortunate that at the time there were no facilities for microscopic diagnosis. The surgical procedure consisted in the removal of some of the cortex in the supposed arm area and the removal of dura over a considerable area involving the motor cortex. That the localization, though seemingly so careless, was correct is proved by the paralysis of the right hand following the operation; that such paralysis will be completely compensated is proved by the subsequent history. That scar tissue of brain or motor cortex is not necessarily the cause of epilepsy, even where there is an epileptic tendency, is also demonstrated. That the removal of an indeterminate amount of brain cortex from the discharging area in Jacksonian epilepsy, together with complete removal of bone and dura over a considerable area, will cure Jacksonian epilepsy in some cases for a period of over eleven years, is demonstrated. The fact that there was edema of the pia and cortex with pressure in the brain cavity, as shown by the bulging, and the later recession of this area with return of pulsation demonstrates that there was a local pathological condition present and that this local condition can be changed by operation.

**CASE 2. (Hospital No. 645).** My second case, though not chronologically my second, is reported at this point because it is especially interesting in comparison with the one just described.

A school girl, eleven years old, was admitted to hospital, October 2nd, 1910.

**Family History.** Her father admitted venereal infection but denied syphilis. He admitted alcoholism in early life. The mother was living and well, had had five miscarriages, three children were dead, four were living but were not very healthy.

**Previous History.** She was perfectly healthy as a baby. At two years of age she had a sudden fever, on the second day of which she became paralysed on the left side. Recovery was complete in one month but during recovery there was a twitching in the left side. There was some indefinite illness at four years of age, the nature of which could not be made out. From then the patient had been a healthy child, normal in every way.

**Present Illness.** Fifteen months ago twitchings began in the left hand at intervals of from seven to eight days. Eleven months ago there was an attack of unconsciousness. The next day there was another major attack be-



ginning with twitching of the left hand followed by the left arm, followed by involvement of the left leg, and she became unable to speak, although her parents believed that she did not entirely lose consciousness. Since that time these major attacks have come sometimes as frequently as every two days, although there have been longer intervals. The tendency recently had been towards less frequent but more severe attacks in which unconsciousness was profound. A typical fit, according to the parents, began with a twitching in the left hand. This gave the patient at least one minute's warning. From the hand the twitching spread up the left arm. Thence it spread to the left leg and the left side of the face. By this time the patient would be apparently unconscious. The patient remained in this state, with convulsive movements of extremities on the left side, for five minutes, when the fit would suddenly terminate. The right side was never involved. There has been distinct mental deterioration, with obstinacy, loss of memory and so forth. She was having many minor attacks along with the major ones.

This patient was kept at the Hospital for study till February 20, 1911. During that time enlarged tonsils and adenoids were removed. She went through an attack of typhoid fever, recovered well, and helped around the hospital but had several major attacks in which she "twitched all over her body" and was unconscious, and many minor attacks of twitching of the hand. The major attacks became more severe as time went on, the spasms becoming tonic and the unconscious periods becoming longer.

Mentally this girl seemed above the average but she was undoubtedly 'odd.' No abnormalities physically were detected except astigmatism which was corrected by glasses. The fields of vision were contracted but our methods were open to criticism. The fundi were normal. There were no scars on the shaved head.

Operation was performed February 21st, 1911, with light chloroform anesthesia. A large flap of scalp was turned down on the right side and an attempt made to enter the skull with a Doyen burr. This and a second attempt were frustrated on account of hemorrhage but the third attempt was successful and the opening was rapidly extended with rongeur forceps, the skull seeming hard and riddled by sinuses. A cranial defect, three and a half inches by two over the motor area was made good. The patient was in shock and the flap was quickly sutured in place, and the patient returned to bed. She responded to treatment for shock and on the third day was in good condition for further operative procedure.

February 24th, she was very lightly chloroformed. The skin was wiped off with alcohol, the flap of scalp was turned back and the whole area irrigated with hot salt solution. The dura

was examined but nothing pathological found. The dura was opened by crucial incision. Pulsation of the brain was normal. The arm area had been calculated by measurement and what was supposed to be the Rolandic fissure was identified by the Farradic current. No abnormalities of the tissues were to be seen or felt. The dura was then further removed, and directly in front of the arm area, apparently involving the pia and cortex, and extending across a sulcus, was a whitish scar-like looking lesion. This was irregularly shaped of about the size of a postage stamp shading off at the edges. The arm and leg areas were mapped out by means of faradization and their limits were well marked. No response could be elicited from stimulation over any part of the scar tissue. Motion of the arm was obtained by the electrode placed anywhere behind the scar. I now copy directly from my notes in the hospital records, "It was directly on the edge of the area but did not involve it and any effect was by contiguity, not by direct action, unless the lesion went deeper than it seemed, and there was actual involvement of motor cells lying out of sight and reach in the sulcus. The lesion did not feel hard or to have any depth. It suggested a healed inflammatory lesion local in character, rather than any new growth. There seemed no indication for excision of the lesion. The lesion being near but not in the area that was originating the nervous discharges, and no special part of the arm area being visibly affected, and the good results often resulting from decompression alone being considered, it was thought wiser to attempt nothing further at this time. So the dura was removed to within one quarter inch of the bony edge all round. There was some hemorrhage which was, however, easily controlled. A rubber wick was laid across the opening and the flap of scalp sutured in place, a couple of chromic gut stitches being first taken in the pericranium." The usual dressing was applied and the patient gotten to bed in good condition. The drain was removed at the end of twenty-four hours. She vomited once or twice but complained of no headache. The wound healed by first intention. Pulsation was marked in the depressed area. Three days after operation the patient had a fit of the usual severity. By May 20th the patient was up and around the hospital. She had two attacks after the operation, general in character but very short, and had none for the next six weeks when she was sent home. I again copy from my notes in her record: "Have offered further operation if the fits are not pretty well controlled; my idea being, if she is going to be much affected by them, it would be advisable to remove the anterior part of the cortex corresponding to the arm area as shown by faradization, i. e. that part next the lesion."

*Report.* I heard by letter from her mother in May, 1912, that she did not have fits so often, generally going a month without one. I have a letter written to me by the patient, February 8th, 1920, in which she says, "Well, I enjoy the best of health. I don't have the fits so bad as I did. Sometimes I go three or four months. But when I have them it will be six times the same day. But the last time I had them I only had the fit once. I am much better than I was and I expect for it to wear away as I get older. I don't believe the operation did me anything. I don't have it half as bad as when I was a youngster so I believe as I get older that I will get better. When I don't have these attacks I feel healthy enough."

*Remarks.* This patient, with a questionable family history, had a severe illness at two years of age causing temporary paralysis of the left side. Roughly, at nine and a half years of age, after previous perfect health, she developed twitching of the hand on that same side. These attacks gradually increased, involving the whole side, until she had, besides minor attacks, many attacks of severe general epilepsy. Mentally this bright girl had become 'odd.' The outlook seemed dubious and at operation a healed scar was found involving the pia and cortex just in front of the motor area of the arm. The question arises as to the proper procedure. It seems unreasonable to try the removal of so great an area of tissue as the scar involved, although probably this was the origin of the fit. It does not seem that, if this was the origin of the irritation, the mere removal of the motor area first involved, that is, the discharging area, was clearly indicated. Previous experience (Koehler and others) has shown that decompression alone is often followed by favorable results so this alone was done, further operative procedure being held in reserve. The result has not been entirely satisfactory as the fits have continued but after a period of nine years the patient can say that there is a continued improvement, and from her letters she appears to be leading a happy life. One cannot say what the outcome would have been without operation nor how much the operation has been the cause of the betterment. If in this case in which a definite pathological lesion was found contiguous to the discharging motor area and in which simple decompression probably prevented progression of the epilepsy and enabled improvement to take place, it is suggestive in connection with the last case (No. 1) where there were very different findings, procedure and result.

CASE 3. (Hosp. No. 768). My third case was a fisherman, aged twenty-three, admitted to hospital, September 10, 1914.

*Family History.* His father died of consumption.

*Previous History.* The patient had always been well and strong.

*Present Illness.* Two days ago, while this young man was out fishing in his boat with some comrades, they noticed that he was making signs to them as if he wished to go home and could not speak. He was taken home and put to bed and it was noticed that his right arm was paralysed. His right leg shortly became paralysed and four or five hours later he became unconscious and vomited. This vomiting continued intermittently until he was seen by a medical student on the next day in the afternoon. The patient was conscious at that time but unable to speak, although he seemed to understand what was said to him. He had right hemiplegia. He was brought to the hospital that night, and the next morning, the condition being about the same, an operation was done for probable meningeal hemorrhage. At operation, the usual flap was turned down and on opening the skull there was a brisk flow of old, dark blood. When this was stopped there was found to be spurting from a branch of the middle meningeal artery and this was tied. It was noticed that his breathing became better and that he could move his right arm. The brain was now pulsating so the flap was replaced, a rubber drain being left in the angle of the wound. The patient made an uninterrupted recovery. The optic disc on the right, which had shown marked signs of neuritis, quickly cleared up, and he soon regained the use of his arm, leg, and face. The right hand, however, remained somewhat spastic and his speech did not become perfectly plain.

A month after he returned home this patient began to have fits. They started with a smarting pain beginning in his right cheek and extending down his arm. The patient would lose consciousness and go into clonic spasms all over. He had these fits about once in two weeks and sometimes two in a day.

On June 24th, nine months after his previous trouble, he returned to hospital where one of these fits was observed and reported as follows. He announced that he had a pain on the right side of his face and that he was going to have a fit. He was put to bed and began to tremble all over. The right arm stiffened and the patient became unconscious. The convulsion lasted three or four minutes and left the right arm and leg limp but five minutes after the general convulsion was over the patient got out of bed and walked to the bathroom.

On August 9th a decompression operation was performed over the motor area on the left side. There was found considerable bulging and edema of the pia and cortex, otherwise nothing abnormal. An area of bone, two inches by two and a half, was removed, the dura being turned back over the bone edges and the scalp sutured back in place.

At the first dressing, when the wick was removed, it was noticed that there was bulging

over the decompression area and pulsation was visible. The movements in the arm had improved but there had been two severe convulsions. The spastic condition of the hand seemed to improve. There seemed to be bulging over the decompression area at times and at such times there would be headache. Twice with a needle, two and a half ounces of straw colored fluid was withdrawn with subsidence of his headache and, as we thought, the warding off of a convulsion. By September 21st, the patient seemed much improved and had not had a convulsion for six weeks.

I saw this patient at intervals for three years. He regained the use of his arm sufficiently to go fishing. He was seen in September, 1920, by Dr. Curtis, who said, "He has an attack about once a month, he still has some weakness and spasm of the arm. He says the attacks begin as before with the spasm in the arm, then a general convulsion." He is, however, able to work, go fishing and support himself.

*Remarks.* This patient, for no known reason and, so far as could be made out, with no trauma, had an extradural hemorrhage from a branch of the middle meningeal artery. He could not be brought to hospital for operation until three days had elapsed when, by operation, the old blood was removed and the bleeding vessel tied. His paralysis cleared up considerably but there was evidence of damage to the cortex as shown by the spastic condition of the hand and disturbance of the speech center. One month after his return home this patient began to have Jacksonian epilepsy of the typical progressive type. In the hope of relief a decompression over the motor area was done. The often observed tension and edema of the cortex were remarked. There was relief at once with improvement in the condition of the arm and speech. There were accumulations of fluid in the decompression area which were tapped with relief of the headache and it seemed as though on-coming convulsions were aborted. This accumulation of fluid stopped, suggesting that drainage was effectual. After an interval of two years fits of lesser severity came on and there has always remained some spasticity of the hand but the patient has been able to support himself in the usual way of the country by fishing and logging. By this drainage having been done, it seems as though progressive advance of the epileptic seizures had been prevented and the general condition as to comfort and usefulness of the patient very much improved for six years to date.

The following eleven cases are those of general epilepsy so-called, as distinguished from those already reported of the Jacksonian type. The picture, as is well known, is an entirely different one from all standpoints, but especially so from the standpoint of the result ob-

tained from operation. There is not space in this report to give these cases in detail. Among these eleven cases, there were only two, which so far as could be made out, were traumatic in character; one in which tumor was the probable cause, and one which progressed to general dementia. Three of these cases had an unfortunate outcome though I do not believe the operative procedure was to blame. They were hopeless from the start. In all of these eleven cases an operation of one type or other was performed, either the decompression of Cushing, or the so-called trap door drainage or decompression of the motor area as recommended by Krause.

CASE 4. (Hosp. No. 447). Was eighteen years old. At operation bulging of the brain was found with lack of pulsation and the Cushing decompression was done. There was infection in this wound and from it an ounce or two of pus was drained. The symptoms were relieved and eleven years and five months later I found there had been no fits since the operation; that there was sometimes pain in the head and weakness of the left arm. This outcome, following infection of a wound opening right into the brain itself, is interesting as showing the protection against infection. There must have formed adhesions in the covering of the brain, acting in much the same way as peritoneal adhesions do in the abdomen.

CASE 5. (Hosp. No. 483). Was thirty-four years old. Adhesions and edema of the cortex and membranes were found. A Krause decompression over the motor area was done which gave relief for a few months with later recurrence of fits and death in three years. This case was a traumatic case with severe injury at the vertex of the skull and very probably elsewhere.

CASE 6. (Hosp. No. 552). Was a baby eight months old. There was a depression over the skull in the motor area. The depression was raised some time after the injury occurred. The child is now eleven years old and has had no symptoms since.

CASE 7. (Hosp. No. 881). Was a man twenty years old. The dura was found tense with what appeared to be a spur in the bone which was removed, the Cushing decompression being done. The patient felt better for a time but in eight months time I heard that the fits had returned and I have not been able to get any data since.

CASE 8. (Hosp. No. 1456). Was a man twenty years old. The Cushing operation was done and increased brain pressure and fluid was found. The patient felt better for a time. For four years since the operation he has had good health except when he has the fits. He thinks that he is not improved.

CASE 9. (Hosp. No. 1469). Was a girl seventeen years old, in which a Cushing operation was done. No pathological findings were noted. This case had less frequent and less severe fits after the operation. She has had fits at intervals since the operation in 1913 but has had none for the last two years to date. She is supporting herself.

CASE 10. (Hosp. No. 1651). Was a boy, nineteen years old. The dura was found tense and bulging, with no pulsation. There was edema of the arachnoid. The Krause valve formation over the motor cortex was performed. This patient had lessened symptoms after the operation but after six years and eight months I am informed that the patient's health is gradually failing, the fits recurring with greater frequency but being less severe.

CASE 11. (Hosp. No. 1718). Was a man twenty years old. He had tension of the brain and edema of the arachnoid and turgid cerebral vessels. This patient had mental improvement and no fits for a time, following the operation, but he later degenerated mentally and died delirious after eight months.

CASE 12. (Hosp. No. 1875). Was a boy eleven years of age. He had adhesions of the cortex. This patient had no fits following the Krause operation and improved in mentality for a while but later seemed to become mentally dull and died of peritonitis a year after operation.

CASE 13. (Hosp. No. 1880). Was a boy aged eleven. The Cushing operation was performed. Intracranial pressure was found, and congestion of the vessels. He improved temporarily but the fits returned. The patient failed mentally and died in two years.

CASE 14. (Hosp. No. 1989). Was a man forty-one years of age. At operation great pressure was found and adhesions but no fluid. The Krause operation was performed with relief of headache but hemiplegia supervened and the patient died with tumor symptoms. In this case error was made in the form of operation adopted. The Cushing operation for the relief of pain should have been done.

In the literature back to 1906 I have been able to find in various articles eighty-one cases in which enough detail is given to draw conclusions. Of general epilepsy I find, twenty-one cases, including the tumor cases, and the type of operation has been variously described as trephining, fenestration, craniotomy or excision of the tumor which naturally means also a decompression. The average time of these reports since the operation is three years and a couple of months, and the reported result on eleven of these is a cure, there are three reported deaths, and the others much improved. In considering these statistics it must be remembered that the tendency is to report only

successful cases and over against these apparent successes must be presumed a large number of cases in which only slight improvement took place, no improvement, bad result, or death.

Of the focal cases, I have found, including the traumatic, forty-one. The length of time elapsed between the operation and final report, excluding nine cases which died evidently as a result of operation, average three and a half years. The type of operation in these cases again is decompression, fenestration, or removal of tumor, or some definite pathological conditions. These cases include those in which excision of the cortical center was performed which also accounts for a high mortality. Ten of these cases are reported as cured; and various degrees of improvement, either in the mental condition or the number and severity of the fits, are reported in such others as survived.

In sixteen cases, where the type of epilepsy was not distinctly stated, in which the same type of operation was performed, the general average as regards time and result seems about the same. And I found three cases in which the patients were cured for eight, four, and three years respectively, the first by amputation of the hand following a burn, the second by the stitching up under ether of a severe wound in the thigh, and the third in which an operation for the extirpation of tubercular glands of the neck was done under ether.

To sum up very roughly. If we take the eighty-one cases which I have found and add the fourteen which I have done it makes ninety-five cases of epilepsy of all kinds in which some form of operation has given beneficial results in a majority of the cases, and a so-called cure after a considerable interval in a percentage. If we exclude the cases in which either extirpation of the cortical center and of tumor was done the mortality is not high.

As to my fourteen cases, there were no "operative deaths." The number is too small to make any general conclusions. I feel that I did no harm to these patients. Without exception there was temporary improvement. Some were improved over considerably extended periods of time and there are three which can be called cures over eleven and a half, eleven years and five months, and ten years. Three are relieved and living useful, happy lives, nine, six, and five years after operation. My general impressions are that it has been well worth while. I have been able to note some local pathological condition in almost all cases. I feel that the pathologist should see the living subject and that he is now in the same relative position that he was in the upper abdomen before the surgeon demonstrated the living pathology at operation.

I do not wish to start the over enthusiastic  
(Concluded on page 78)



TABLE 1.—RÉSUMÉ OF AUTHOR'S ELEVEN CASES OPERATED FOR GENERAL EPILEPSY.  
(Three cases of Jacksonian epilepsy reported in full in the text.)

HOSP. NO. OF CASE	AGE OF PATIENT	PATHOLOGIST FOUND AND TYPE OF OPERATION	TEMPORARY RESULT	ELAPSED TIME TO FINAL REPORT	RESULT AT THAT TIME	REMARKS
447	18 yrs.	No pulsation. Bulging of brain. Cushing decom- pression.	Improvement.	11 yrs. and 5 mos.	No fits since operation. Sometimes pain in the head and weakness of left arm.	Infection of operation wound.
483	34 yrs.	Adhesions and edema. Decompression of cortex.	Relief for few months.	3 years	Death after recurrence of fits.	This was a traumatic case with severe in- jury at the top of the skull.
532	8 mos.	Depression of skull. Trepining over motor area.	Well.	10 years	No attacks.	Traumatic case.
881	20 yrs.	Dura tense. Spur in bone. Cushing decom- pression.	Felt better.	8 months	Fits continue.	Unable to follow up case.
1456	20 yrs.	Increased press- ure and fluid. Cushing decom- pression.	Feels better. Less severe fits.	4 years	Good health except when he has fits. Thinks he is no better.	
1460	17 yrs.	Not noted. Cushing decom- pression.	Fits less often and less severe.	9 years	Fits at in- tervals but none for last 2 yrs. Is support- ing herself.	Seen person- ally and ap- pears very well.
1651	19 yrs.	Dura tense, bulg- ing, no pulsation, edema of arach- noid. Modified Krause's operation.	Lessened symptoms.	6 yrs. and 8 mos.	Fits recur- red at greater frequency but less severe. Feels well between fits. General health failing gradually.	
1718	20 yrs.	Bulging brain and edema of arachnoid. Turgid, dusky ap- pearing vessels. Modified Krause's operation.	Mental im- provement and no fits.	8 months	Died deliri- ous in 8 months.	
1875	11 yrs.	Adhesions of cor- tex. Modified Krause's operation.	No. fits. Improved men- tally.	1 year	Had no fits after he left hospital but seemed dull. Died of peri- tonitis.	
1880	11 yrs.	Intro-dural pres- sure and fluid with congestion of vessels. Cushing decom- pression.	Improved tem- porarily.	2 years	Fits return- ed, failed mentally and died in 2 yrs.	
1980	41 yrs.	Pressure and ad- hesion. No fluid. Modified Krause's operation.	Relief of head- ache but hemi- plegia.		Death from tumor symp- toms.	Evident case of tumor. Should have had Cushing operation for relief of pain.

TABLE II.—CASES FOUND IN LITERATURE BACK TO 1906

TYPE OF CASE.	REFERENCE.	NUM- BER	LENTH OF TIME SINCE OPERATION.	TYPE OF OPERATION.	REPORTED RESULT.
General	W. G. Spencer, Proc. Roy. Soc. Lond., 1906-10, III. Clin Sect., p. 65.	1	3 years	Trephining	No fit since operation except one slight one after smelling varnish. Has kept to vegetarian diet.
"	W. Alexander, Lancet, Lond., 1911, II, pp. 432-433.	2	8 years	Fenestration of dura	Cured.
"	<i>Ibid.</i>	3	2 years	Fenestration on left side	Had no fits for 12 months after operation and had much improved. Died of Bright's disease at end of two years and fits returned before his death.
"	<i>Ibid.</i>	4	4 years	Trephining, 1st op. left side, no result. 2nd op. right side	Became very sensible and intelligent. Attacks less by one half.
"	<i>Ibid.</i>	5	3½ years	Trephine and fenestration	Much better since operation. After 3½ years had attack from which he died.
"	<i>Ibid.</i>	6	1 year	Fenestration	Attacks one-fourth of normal number before operation.
"	<i>Ibid.</i>	7	1 year	Fenestration	Reported to be much improved and few attacks he has slighter than before operation.
"	Charles H. Frazier, Tr. Coll. Phy., Phila., 1912, 3 S., xxxiv, pp. 82-103.	8	6 years	Craniotomy	No attack in 3 years.
"	<i>Ibid.</i>	9	4 years	Blood clot in motor region removed	Only one attack since operation. None for last three and a half years.
"	<i>Ibid.</i>	10	5 years	Craniotomy	Has had no attacks since operation.
"	<i>Ibid.</i>	11	3 yrs. and 9 mos.	Craniotomy and decompression	Only one mild attack.
"	<i>Ibid.</i>	12	nearly 4 years	Craniotomy and decompression	Has had no convulsions or seizures since operation.
"	G. K. Collier, N. Y. State Jour. Med., New York, 1912, xII, p. 653.	13	nearly 2 years	Fenestration and drainage	Attacks lessened.
"	<i>Ibid.</i>	14	nearly 2 years	Fenestration and drainage	First year after operation number of attacks 40, same as previous year. Second year, 12.
"	<i>Ibid.</i>	15	8 months	Fenestration	In 11 days before operation had 148 attacks; none since.
"	Theophil Kilgusmann, Phy. Surg. Detroit and Ann Arbor, 1913, xxxv, pp. 286-300, 318.	16	not stated	Trephining	Discharged 30 days after operation in perfect health. No further report.
"	<i>Ibid.</i>	17	not stated	Trephining	No seizures since operation. No date stated.
"	Surgery of the Brain. By Fedor Krause.	18	no operation		Cure without operation.
"	<i>Ibid.</i>	19	4 years	Decompression	Improvement.
"	<i>Ibid.</i>	20	3 years	Decompression	Relieved, but died in three years.
"	<i>Ibid.</i>	21	1 month	Excision tumor	Died
Focal	Thomas H. Kelley, St. Louis Med. Review, LX, No. 6, pp. 161-166.	1	1 year	Trephining	No recurrence.

TABLE II (continued).

TYPE OF CASE.	REFERENCE.	LA.	NUM- BER	LENGTH OF TIME SINCE OPERATION.	TYPE OF OPERATION.	REPORTED RESULT.
Focal	W. Alexander. <i>Lancet</i> , Lond., 1911, ii, pp. 2-2488.		2	5 years	Not stated	No mental improvement but had only 14 fits in 3 years after operation, while formerly had several thousand annually.
"	<i>Ibid.</i>		3	4 years	Fenestration	Sixty-eight fits only since operation. For almost the last year there have been none except slight faintings lasting only a few seconds.
"	<i>Ibid.</i>		4	about a year	"Usual operative technique on right side of head"	Mentally and physically much improved. A very promising case. Has only one attack, on an average, per week.
"	<i>Ibid.</i>		5	2 years	Fenestration	Mental condition very much better. Attacks about one half of original number.
"	<i>Ibid.</i>		6	2 years	Fenestration	Has had no fits and no medicine since operation.
"	Charles H. Frazer. <i>Tr. Coll. Phys. Phila.</i> , 1912, 3 S., xxxiv, pp. 82-103.		7	7 years	Evacuation of sub-cortical cyst.	Attacks less frequent and less severe.
"	<i>Ibid.</i>		8	6 years	Evacuation of cyst	Gradual subsidence of attacks; none for last 9 months.
"	F. C. Simpson. <i>Louisville Month. Jour. Med. and Surg.</i> , 1913-14, xx, pp. 19-23.		9	1st op. 1 year 2nd op. 11 mos.	Decompression and cranioid opened and fluid evacuated and portion of arm center dissected away	No relief. Attacks continued to a little more than month after operation when patient started taking medicine from a druggist and had greatly improved. Fits recommenced when medicine was stopped. ( <i>Query</i> : Itated from operation or medicine.) For three months has been without medicine, still improving.
"	Theophil Klingmann. <i>Phy. Surg.</i> , Detroit and Ann Arbor, 1913, xxxv, pp. 296-300, 318.		10	not stated	Decompression	Uneventful recovery after operation. Nothing further reported.
"	<i>Ibid.</i>		11	not stated	Repeated lumbar puncture Kocher	Recovery complete in 6 weeks.
"	August Schlachner. <i>Louisville Month. Jour. Med. and Surg.</i> , 1913-14, xx, pp. 33-52.		12	1 year	Osteoplastic flap op. and freeing of adhesions	Had no suggestion of epilepsy until a year after operation when there was tingling in both arms but no fits. Very decided improvement.
"	J. B. Murphy. <i>Surg. Clin. Chicago</i> , 1914, iii, pp. 931-943.		13	2 days	Left subtemporal decompression	Thirty-six hours after operation convulsions and coma with death of patient 18 hours later.
"	Robert Earl. <i>Minnesota Med.</i> , St. Paul, 1910, ii, pp. 325-329.		14	2½ years	Excision of cortex	No convulsions since operation.
"	Fedor Krause. <i>Surgery of the Brain</i> .		15	18 hours	Cortical excision	Death in collapse.
"	<i>Ibid.</i>		16	22 hours	Excision of center	Death.
"	<i>Ibid.</i>		17	3 days	Excision of angiona	Death 5 days later.
"	<i>Ibid.</i>		18	1 year, 5 months	Excision of tumor	Cured.
"	<i>Ibid.</i>		19	2 years	Excision of scar	Cured.
"	<i>Ibid.</i>		20	1 year		No influence.

TABLE II (continued).

TYPE OF CASE.	REFERENCE.	NUM. BER	LENGTH OF TIME SINCE OPERATION.	TYPE OF OPERATION.	REPORTED RESULTS.
Focal	Fedor Krause, Surgery of the Brain.	21	not stated	Excision of center	Not stated.
"	<i>Ibid.</i>	22	17 years	Excision of cyst	Cure and cure of idiosy.
"	<i>Ibid.</i>	23	not stated	Excision of cyst	Not stated.
"	<i>Ibid.</i>	24	7½ years	Excision of cyst	Cure.
"	<i>Ibid.</i>	25	9 months	Excision of cyst	No result. Death in 9 months.
"	<i>Ibid.</i>	26	5 months	Excision of cyst	Cure.
"	<i>Ibid.</i>	27	3 years	Excision of center and cyst	Cure.
"	<i>Ibid.</i>	28	2½ years	Excision of center	Improvement.
"	<i>Ibid.</i>	29	8 years	Excision of center	Cure.
"	<i>Ibid.</i>	30	3 years	Excision of scar	Improvement.
"	<i>Ibid.</i>	31	2 months	Decompression	Improvement.
"	<i>Ibid.</i>	32	a few hours	Excision of tumor	Death.
"	<i>Ibid.</i>	33	a few hours	Excision of center	Death.
"	<i>Ibid.</i>	34	4 years	Ligation of angiona	Cure.
"	<i>Ibid.</i>	35	24 hours	Excision of tumor	Death.
"	<i>Ibid.</i>	36	33 days	Removal of cyst.	Death.
Traumatic	Thomas H. Kelley, St. Louis Med. Review, ix, No. 6, pp. 161-163.	1	22 months	Excision tumor	Four convulsions. Mental condition improved.
"	W. Alexander, Lancet, Lond., 1911, ii, pp. 932-938.	2	1 year	Trephining	No improvement.
"				1st op. fenestration on right side where there was a depression in the skull. 2nd op. on opposite side	Improved but, owing to the patient's erratic character, difficult to control and no systematic treatment could be carried out.
"	A. Schachner, Louisville Month. Jour. Med. and Surg., 1913-14, xx, p. 33.	3	1st op. 3 years 2nd op. 1 year	Depressed bone removed. Koecher op.	Condition worse.
"	William M. Leszynsky, Jour. A. M. A., Chicago, 1914, lxii, p. 612.	4	3 yrs. and 7 mos.	Edge of bone defect removed; dura incised and dissected off the brain tissue.	Decided improvement. No fits for a year. Once had twindling in both arms but no seizure.
"					Has never had fit since operation. His general health has been good.
"	Surgical Clinics of Chicago, 1914.	5	about a month	Large cyst opened and drained	Condition worse.
Not stated	Parker, Rushton, Brit. Med. Jour., Lond., 1907, i, p. 1177.	1	2 years	Ligation of left common carotid	First 4 days after operation rational. Later, mental confusion increased with well marked sensory aphasia. Died two weeks after leaving hospital, unimproved. Relieved. Fits less severe.



TABLE II (continued).

TYPE OF CASE.	REFERENCE.	NUM- BER.	LENGTH OF TIME SINCE OPERATION.	TYPE OF OPERATION.	REPORTED RESULT.
Not stated	E. M. Robinson. New Orleans Med. and Surg. Jour., 1907-8, lx, pp. 96-98.	2	3 years	Trephining	Less than one year after operation fits ceased and there have been none since. Paralysis began to improve directly after operation and speech gradually returned. Much improved mentally. Family report 1 or 2 fits since return from hospital, but nothing like those before. Is now like normal child and has gained remarkably in weight. Fits greatly reduced. Has developed mentally and physically. Fits only 1 per week as against sometimes 4 per day before operation. Distinctly improved. Attacks much reduced. Mental and physical condition much improved. Attacks much less.
"	E. E. Padgett. Indianapolis Med. Jour., 1909, xli, p. 41.	3	under a year	Trephining	
"	W. Alexander. Lancet, Lond., 1911, li, pp. 932-933.	4	3 years	Fenestration	
"	<i>Ibid.</i>	5	2 years	Fenestration	For nearly a year has been without attacks and without medicine. Operation in May. Reported attacks disappeared after November. Returned to work. One attack during year. Hemiplegia gone, speech returning slowly. Mental condition much brighter. Fits much less. One-tenth of what they were before operation. Year of operation, 27 attacks; 1st year after, 12 attacks; 2nd year after, 0 attacks. Patient died one day after operation from chloroform necrosis. Operated on in November. Had last convulsion in February and none since to date (Nov. 20, 1913).
"	<i>Ibid.</i>	6	2 years	Trephining and fenestration	
"	<i>Ibid.</i>	7	3 years	Fenestration and drainage	
"	<i>Ibid.</i>	8	1 year	Fenestration	Free from attacks for 7 months and feeling much better than for years. Surgeon explains this by increased general care as the operation could not have helped in any other way than as a relief in an emergency. No convulsions since operation. Before operation an average of 2 a week.
"	<i>Ibid.</i>	9	1 year	Fenestration	
"	<i>Ibid.</i>	10	1 year	Fenestration	
"	<i>Ibid.</i>	11	1 year	Fenestration	Free from attacks for 7 months and feeling much better than for years. Surgeon explains this by increased general care as the operation could not have helped in any other way than as a relief in an emergency. No convulsions since operation. Before operation an average of 2 a week.
"	G. K. Collier. New York State Jour. Med., xli, p. 633.	12	2 years	Fenestration	
"	<i>Ibid.</i>	13	1 day	Fenestration	
"	Louis Frank. Am. Jour. Surg., New York, 1914, xxviii, pp. 113-117.	14	1 year	2 operations. Excision of brain substance, motor area of left arm in which spasm always began Cerebral decompression	Free from attacks for 7 months and feeling much better than for years. Surgeon explains this by increased general care as the operation could not have helped in any other way than as a relief in an emergency. No convulsions since operation. Before operation an average of 2 a week.
"	Donald A. Nicholson. Northwest Med., Seattle, 1914, N. S. vi, p. 140.	15	7 months	Cerebral decompression	
"	Arthur C. Strauchauer. Minne- sota Med., St. Paul, 1919, li, pp. 382-385.	16	10 years	Decompression and removal of piece of bone and exostosis on inner table of plate of skull	
Epilepsy relieved by operation for other causes.	Matthew Woods. Jour. A. M. A., Chicago, 1906, i, pp. 933-935.	1	8 years	Amputation of hand for burning accident	No convulsion since operation.

TABLE II (continued).

TYPE OF CASE.	REFERENCE.	LENGTH OF TIME SINCE OPERATION.	TYPE OF OPERATION.	REPORTED RESULT.
Epilepsy relieved by operation for other causes.	Matthew Wood's Jour. A. M. A., Chicago, 1908, I, pp. 659-663.	4 years	Operation for severe laceration of thigh. Stitches put in under ether.	Free from convulsions.
<i>Ibid.</i>	<i>Ibid.</i>	3 years	Extirpation under ether of bunch of tubercular glands in right surgical triangle extending up toward the ear.	No convulsions since operation.

(Concluded from page 72)

surgeon on a career of indiscriminate operating for epilepsy but I do think that there is indication that in some cases operation is beneficial. If this is conceded the first great difficulty is to pick such cases as may be so benefited; the second is to decide what operation should be performed. The only way to get data on which to base opinion is the study of cases and it is for that reason I am making this report.

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- <sup>3</sup> V. A. Chicago, 1908, I, 655-663.
- <sup>4</sup> Brit. Med. Jour., London, 1906, I, 1920; St. Louis Med. Review, Vol. IV, No. 6, 161-165.
- <sup>5</sup> New York State Med. Jour., New York, 1912, xli, 632.
- <sup>6</sup> "Pagan and Christian Creeds," by Edward Carpenter.

## PYORRHEA AN ANCIENT DISEASE.

BY CAROLUS M. CORR, M.D., LYNN, MASS.

PUS around the teeth occupies such a prominent place as a cause of disease, and the theories brought forward to explain the origin of the condition are so varied and often contradictory, that any facts bearing upon the question should be very welcome. The explanations, often vehemently insisted upon, are ingenious and interesting, and vary all the way from a change in the saliva to a lack of green vegetables in the diet. THE BOSTON MEDICAL AND SURGICAL JOURNAL has very kindly published two articles of mine, on the subject of pyorrhea. In the first of these, I called attention to an anatomical factor that seemed to me of some importance, and in the second, to the menace of the toothbrush as a means of keeping up the infection of the gums. In these articles, I did not claim that either of these conditions was the sole cause of pyorrhea. I refrained from making such a claim for the good and sufficient reason that I did not believe pyorrhea to be caused by any one, two, or three factors, but rather that it might be caused by a large number of vicious habits or accidents.

In this article I wish to call attention to three quotations, two of them relating to the antiquity of the disease, and the third to a method of treatment which may be of some value. In 1912, Halling, in the Thames Valley, not far from London, needed a new sewage basin, and in excavating for this, the workmen unearthed a fossil skull that Arthur Keith believes to have been deposited in its resting place at least twenty-five, and possibly thirty thousand years ago. The point of interest to us is Keith's remarks concerning the teeth. This will be found on page 79 of Keith's "The Antiquity of Man." First, in regard to the age of the man—"a man not over forty years of age, probably considerably under." In regard to the condition of his teeth, he says: "For a man of this age, the teeth were in a surprisingly bad condition. They were deeply worn;

the enamel had disappeared by wear from the chewing surfaces of the crowns, exposing the dentine, and, in some cases, the pulp cavities. Of the six molar teeth of the lower jaw, five had been lost from disease—not from caries, but from abscesses or gumboils forming at their roots. One of the premolar teeth had also perished before death; the incisors, canine, and premolars, some of which had fallen out after death, were much worn. The food of the Halling man was rough in nature, and he suffered severely from dental disease." This man lived on a mixed diet, and such vegetables as he had were fresh. His meat varied in freshness. When it was first killed it was, of course, fresh, but, unless there was an over-supply, the family did not throw any of it away, and the last of it was probably rather high.

The above quotation carries the disease pretty far into the past, but it is carried still farther in the description of the LaChapelle man, who is believed to have lived one hundred thousand years ago. To quote again from Keith, "The Antiquity of Man," page 118, "but the open condition of the sutures between the bones of the massive skull suggests a younger age—perhaps under forty. For such an age, the teeth, which were planted in jaws of exceeding strength and size, are in a surprisingly bad state. All the molar or chewing teeth had been lost from disease during life." Evidently the same conditions that caused the loss of the LaChapelle man's teeth also caused the loss of the Halling man's teeth seventy-five thousand years later.

Coming down to more modern times, I will give a quotation from Josselyn's "Account of Two Voyages to New-England," published in 1675. In giving an account of the diseases of New England, he says (page 142): "Men and Women keep their complexions, but lose their Teeth; The Women are pittingly Tooth-shaken; whether through the coldness of the climate, or by sweetmeats of which they have store, I am not able to affirm." The same condition that Josselyn reported in 1675 still exists in the rural parts of New England. The fashion of wearing false teeth that began more than fifty years ago still persists among the country people. When I lived in Maine, thirty years ago, the percentage of people wearing false teeth was exceedingly high, and I have every reason to believe that it has not grown less. This condition could not be due to lack of fresh vegetables. The diet was very well balanced, and I do not think the diseased teeth could be ascribed to errors of that kind.

My last quotation is from J. J. Mann's "Round the World in a Motor Car." On page 67, in speaking of the Hindus, he says: "And yet the native, clad in rags, or a rag, dirty beyond description, brushes his teeth every day, and never twice with the same toothbrush. He

would consider that indescribably unclean, for has not his religion taught him to cut a twig from a special tree, which has an astringent sap, and use one of these with plenty of water every day, and as the operation takes place on the sidewalk, or at the place where the sidewalk should be, you can see him daily, as you pass, engaged in this interesting occupation, and his teeth are as white as ivory. If you want to insult him, you must say his mouth is dirty, and that will fill his cup with bitterness to the brim."

Do these quotations describe the disease and indicate the means of cure, or rather prevention? Keith says that the development of man's brain relieved the work of the teeth; that is, that he lived on better food and better prepared food. In a general way the statement is true, but in a more specific sense it is not. The LaChapelle man had as large a brain as the average man of today,—in fact, larger,—he had the use of fire, he buried his dead, and he had some sort of a belief in an hereafter. The larger brain is an indication that the man was better able to learn by tradition, that is, by the experience of others, than one with a smaller brain. The handicap of the fossil man was that he had no way of recording his knowledge so that it would be easily available to others. His brain did save the work of his teeth, and the teeth grew smaller, but his progress was slow. I doubt whether the lack of the use of the teeth, in that stage of development, led to disease. I believe the diseased gums of the fossil man were caused as they are caused today, by infection. Our present method of living does not develop the teeth so that they resist infection, and the toothbrush, as it is commonly used, does not remove infection, even if it does not add to it. The toothbrush can be so taken care of that it will be a help and not a menace.

Pyorrhea has evidently afflicted the human race for many thousands of years. The Halling man had a well-marked case, and the LaChapelle man quite probably suffered from it. The disease was present in New England in 1675, and it is here today. A disease that began so early and has persisted so long must have a definite cause. The two factors that are common to all the stages of man's development are first, the teeth have been continuously less used, and have grown smaller, and second, infection. Diet, lack of fresh vegetables, changes in the secretions of the mouth, and many other theories do not explain a disease that has lasted so long. The problem of treatment seems to me to be the treatment of recurring infection in an organ that is becoming useless. This can be done, but it is evident that the disease will not stay cured. Nature makes no effort to save an organ that has become useless, or nearly so. If we wish to save our teeth, we must bear in mind that they are being less and less used, and that unused or little used organs are prone to infection.

## GENERAL PHYSIOLOGY IN ITS RELATION TO THE PROBLEM OF NEW GROWTHS.

BY FREDERICK H. PRATT, M.D., BOSTON.

THE honor has fallen upon me to construct a preface to topics that are to follow—to conjure up a mist of generality out of which shall emerge clear images drawn by others. But, even vaguely, what has physiology to do with cancer? Perhaps the unwontedness of the idea may tempt you, as it has tempted me, to enquire.

By general physiology we understand the study of life—not in order to elucidate the workings of any specific kind of living form, for example, the human body or the cactus plant, but to get as near as possible to the answer to the question: What is life itself—life in its very essence, wherever and in whatever diversity it may be found? Now, the very existence of such a science implies a common process in the objects studied; else were it a task of mere curio collecting, and no science at all.

A common process reflects a common structure. Data from many directions appear to show that protoplasm is of the nature of an emulsion—at least two liquids, nonmiscible, one suspended in the other. Thus the suspended portion, or phase, is separated into minute particles tending from their surface tension to be spherical. This phase is thus dispersed, or discontinuous, whereas the phase in which it is suspended is continuous throughout. As we pass in fancy through a mass of protoplasm, however, we come eventually to a partition beyond which lies the outer world, or the interior of a further protoplasmic mass, such as nucleus, neighbor cell, etc. Thus is living material provided with a multiplicity of surfaces—surfaces of suspended particles and surfaces of partitions. Hence it is that certain physical and chemical forces especially favored by multiplicity of boundaries have come to be regarded as all-potent in the living process—by some, indeed, as the living process itself. Such forces are surface tension, osmosis, adsorption, and the electrical and chemical interactions involved in them.

If these are the essential properties of life (or, if you prefer, properties essential to life), then the conception of a simple, undifferentiated, primordial life-substance is as yet hardly tenable. For it is well demonstrated that although certain cell products, as enzymes, may act potently after the cell is crushed, the functions really characteristic of life—response, conduction, respiration, growth, etc.—all disappear with the destruction of this manifold system of surfaces and partitions. Function seems determined and limited by structure. A new morphology has thus sprung up—the minute

anatomy of the chambered cell of life. And a new physiology—the attempt to describe, measure and correlate the subtle mechanical, chemical and electrical forces occasioned by and playing upon this structure, and to trace the interactions between it and the non-living environment. Such is the field of general physiology, and such must be the source to which we must turn in our endeavors to unravel the secret of behavior of cancer cells and of all cells.

Let me therefore urgently remind you that not only to workers in cancer clinics—direct applicers of knowledge—must the world turn for light on this appalling human scourge, but also, with sympathy and all needed aid, to every investigator in the realm of living things and of the forces utilized by living things. The titles of scientific publications generally are distressing in their remoteness from human interest. Yet, I am almost tempted to say, the more remote the better. Where fundamental progress is to be made, the utilities of preconceived application are often misleading. This is particularly true of work in general physiology, where, nevertheless, every step of progress is basic to the welfare of the living creation. In this connection two dicta especially may be urged:

First, honor and aid the investigator whose whole aim is the solution of his *immediate problem*. If he had to worry about scurvy, or diabetes, or cancer, how could he arrive unerringly at the relative permeability of plasma membranes, or follow with unabated breath the wanderings of the X-chromosome! Yet to him the world looks for light in its biological, and therefore therapeutic, darkness.

Secondly, despise not the investigator's choice of material. Some of us cannot understand the significance of the mouse-tumor. Others may scorn the study of the disease of a cabbage plant. Many would turn with contempt from work done on a star-fish egg. The point we miss is this: *all success in the investigation of vital processes depends on the happy choice of material*. Certain cellular forces are common to all living things. But some cells, through accidents of arrangement or accessibility of structure, or of specialization of activity, are open to fruitful experiment in a given problem where others are not.

Thus the problems of *growth* belong to workers in widely variant material, all striving toward a common end—the questions at issue being: Why does the daughter cell resemble the mother cell—the problem of heredity; how does differentiation progress along orderly lines and end in the one predictable type of tissue?—the problem of development. And how are these bonds of order broken, and a wild or sullen mob of low-grade cells loosed from the customary tissue discipline, destined to crush or poison *in situ*, or to be carried along paths of transport to distant deeds of violence?



Would that all such anarchies of the tissues were subject to short-cut approach through the discovery of controllable parasitic causes! Yet, even if in some happy future we shall recognize a true infectious origin of human cancer, even then the fact of parasitism is only one element in the solution; so often does the existence of two organisms in an effect (i.e., parasite and host) complicate rather than simplify the problem as a whole.

Let us gather the light from every star. Let us focus that light patiently as it comes. As to life in the normal cell—behold, we know not anything beyond a promising outline; but the abnormal cell must share in the growing onslaught of that knowledge.

## Current Literature Department.

### ABSTRACTORS.

GERARDO M. BALBONI	FRED S. HOPKINS
LAURENCE D. CHAFFIN	CHARLES H. LAWRENCE
AUSTIN W. CHEEVER	HERMAN A. OSGOOD
IRADOR COSMAT	EDWARD H. RISLEY
EARNEST M. DALAND	WILLIAM M. SHELDON
ROBERT S. EUSTIS	GEORGE G. SMITH
ROBERT M. GREENE	JOHN B. SWIFT, JR.
JOHN B. HAWES, 2d	WILDER TILSTON
JOHN S. HODGSON	BRYANT D. WETHERELL

### SYPHILITIC DISEASE OF THE LIVER.

CARNELLI, R. (*Polieticlinico*, September 26, 1921, No. 39) reports in detail the case of a man 22 years of age with a large smooth rounded tumor of the liver—painless and resistant to touch. The whole liver was enlarged. The tumor had been growing for two years without pain or fever but there was progressive weakness and discomfort from the size. The Wassermann test was negative and a diagnosis of sarcoma made. A year later the patient presented himself with processes in the long bones and a suppurating lesion on the shoulder. Mercurial treatment was begun with marked improvement. The Wassermann test was positive now. Carnelli believes it was a congenital syphilitic disease of liver developing late and the bone lesions were of the late congenital type. Such congenital lesions have been known to develop as late as the age of 28.

In every case of abdominal tumor it is always well to consider syphilis and to be very cautious regarding operation. All possible laboratory tests should be made. Syphilitic disease may effect a liver already pathologic from other causes and treatment of the syphilis may induce marked improvement even though the other factors may continue to operate. It is possible to discover a syphilis even without the aid of the Wassermann test. He comments on the difficulty in distinguishing a syphilitic a malignant, or hydatid cyst or a tumor in the gall bladder or kidney region.

[G. M. B.]

### CLINICAL AND EXPERIMENTAL OBSERVATIONS IN THE USE OF SALINE IRRIGATION IN THE TREATMENT OF DIFFUSE PERITONITIS.

WILLIS, A. MURAT (*Surgery, Gynecology and Obstetrics*, October, 1921), writes as follows:

The mortality in the series treated by irrigation was 16 per cent. as compared to 50 per cent. in those treated by the "get in quickly—get out quicker" meth-

od. So far as I could determine, the patients in the irrigated series were fully as ill as those in the non-irrigated, and, in my hands, I am convinced that the same high mortality would have resulted had irrigation been omitted.

Aside from the reduction in mortality, I attribute to the use of irrigation a shorter and smoother convalescence and a lessening of the importance of drainage and the Fowler posture.

In the face of this evidence, is it logical to consider that irrigation is a procedure so fraught with danger to the patient? With a full realization of the adverse views held by many, I wish to state that my clinical experience and many facts of animal experimentation indicate to me strongly that this measure is of value in the treatment of progressive diffuse peritonitis, and I am convinced that it enabled me to save patients who would otherwise have succumbed.

[E. H. R.]

### PAPILLARY CYSTADENOMA OF THE OVARY

ERDMANN, J. F., and SPAULDING, HARRY V. (*Surgery, Gynecology and Obstetrics*, October, 1921) say:

Papillary cystadenoma is the most important surgical disease of the ovary. It is variously stated to occur in from 10 to 27.5 per cent. of all ovarian tumors. A large number of cases occur in patients under the age of thirty. The most probable development is from a cellular perversion of the germinal epithelium.

There is a strong tendency to bilateralism (22.2 per cent.) and local metastasis. General metastasis is not rare. Bilateral ovarian tumors demand a careful examination of the abdominal viscera and breasts.

The absence of symptoms referable to the pelvic organs is a deceptive feature of the disease. Ascites is an advanced symptom and indicates rupture, peritoneal metastasis, and often malignancy. Every woman with ascites, without a sufficient explanation in the liver, heart, peritoneum, or kidneys, should be laparotomized even though bimanual examination be negative.

Microscopically 66.6 per cent. of papillary cystadenomata are cancerous or precancerous.

Every ovarian cyst must be removed intact by abdominal section as soon as discovered.

In unilateral oophorectomy, the patient should be periodically examined.

Careless or rough handling resulting in intra-abdominal rupture, tapping to reduce the size of the tumor and the vaginal approach cannot be too strongly condemned.

Radium should be employed in cases in which the ovaries or the peritoneal implants could not be surgically removed.

[E. H. R.]

### SURGICAL TREATMENT OF MEGACOLON.

DOWD, CHAR. N. (*Annals of Surgery*, October, 1921). Dowd presents a brief but interesting article on the treatment of this rather obscure condition. In spite of the annoyances of such a procedure, he finds that the Mikulicz operation is the better procedure to use. His review of the surgical treatment is of distinct value.

[E. H. R.]

### CHRONIC CHOLECYSTITIS WITHOUT STONES—DIAGNOSIS AND TREATMENT

MYER, W. (*Annals of Surgery*, October, 1921). Myer goes to some extent into a differential diagnosis of cholecystitis with and without stones.

He refers to a statement made by A. W. George of Boston that a healthy gall-bladder does not show on an x-ray plate under ordinary conditions. Therefore, if the x-rays demonstrate a distinct outline of the gall bladder, without showing the presence of

stones, such a gall-bladder is to be considered pathological. This is true in about 90 per cent. of cases. The author, however, does not believe that George's statement is correct in such a large per cent., but probably it should be looked upon as a possible feature in a considerable number of cases.

He further states that, in view of the fact that bacteria are frequently found in the center of gall-stones, we can understand how it happens that cholecystitis without stones is a precursor of cholecystitis with stones. Cholecystectomy in cases of cholecystitis without stones, therefore, clearly represents a prophylactic operation in many instances and is of particular benefit to those who must get well in order to be able to earn their living.

Chronic cholecystitis without stones is a much more frequent disease than has hitherto been believed. Clinically, it seems to take the same place in the upper abdomen as chronic appendicitis does in the lower.

If the gall-bladder is only temporarily drained, such an organ may become the seat of recurrent inflammation at any time and without any provocation. It also may be the nidus for formation of further stones. The mortality of the operation done in the interval is almost as negligible as that of appendicitomy in the interval stage.

The author considers that temporary drainage of the abdominal cavity after cholecystitis is an absolute necessity, thus differing from some more radical temporaries. He does not believe in the drainage operation because of the danger of complications such as stone formation, re-infection, adhesions, etc.

The human anatomy is as well off without the gall-bladder apparently as it is without the appendix.

[E. H. R.]

#### SOME CONSIDERATIONS ON THE FUNCTIONS OF THE LUNG

ROGER, H., in *La Presse Médicale*, October 6, 1921, describes experiments with animals in whose veins he injected a solution of macerated lung tissue in salt solution. There was a rapid rise in blood pressure, followed by death. Autopsy showed complete clotting of all the venous blood. When a more dilute solution was used there was a fall in blood pressure and the blood became incoagulable. He shows:

1. Either the blood or the serum must neutralize the effects of the injected material in the second experiment.
2. The immunity is an acquired one and cannot be transferred to other animals.
3. The lung produces a thrombokinasin.
4. Powdered, desiccated lung applied to an oozing area stops bleeding.
5. Removal of a portion of a frog's lung decreases the coagulability of his blood.
6. Albumin is not present in the sputum in simple bronchitis. It is present in pulmonary tuberculosis, pneumonia, pulmonary edema and cardiac or renal bronchitis. In tuberculosis and pneumonia the albumin is that of the lung parenchyma. In the other conditions it is the albumin of the blood.
7. The albumin present in the blood is an autolytic product.

The author experimented with lung tissue undergoing autolysis. He found that:

1. The macerated lung gradually lost its toxicity to animals injected with it.
2. Its injection caused a momentary rise in blood pressure.

He concludes that the lung tends to maintain a high blood pressure. His experiments have shown the presence in the lung of amylase, catalase, a glycolytic ferment, some proteolytic ferments, explaining autolysis, and a lipase, which splits neutral fats.

Specimens of arterial and venous blood, removed from a dog five hours after eating a meal rich in fats, showed that the venous blood contained 5 g. less fat per liter of blood than the arterial. From this he

argues that the lung also destroys some of the fats, as analysis of the lung does not show an accumulation of fat in the lung tissue.

[E. M. D.]

#### CHOLELITHIASIS

ALDOR (*Wien. klin. Woch.*, October 6, 1921) presents a brief study of cholelithiasis in its relation to gastric chemistry, and to surgical indications. He concludes that the gall bladder is not to be regarded as a simple reservoir, since its removal leads to functional disturbances which on the one hand express themselves in changes in the composition and excretion of bile and, on the other hand, have as a consequence a genuine disturbance of gastric chemistry. The genesis of cholelithiasis and colangitic processes,—and it is these which determine the nature of the pathologic picture,—is not always to be sought in a haematogenous or enterogenous colon infection, but in many clinically characteristic cases in a gastro-lentic descending infection. In the determination of indication for surgical intervention, the clinical picture is more important than the topical diagnosis. The author believes that cancer of the gall-bladder is not to be regarded as a complication of gallstone disease.

[R. M. G.]

#### BIOLOGIC DETERMINATION OF DIET

In a preliminary communication, published as a continued article (*Wien. klin. Woch.*, October 20, 27, November 3, 1921), BECKZELLER and a number of other authors publish a study of diet selection suggested by the difficulties of the food situation in Vienna. They consider successively the active effect of foodstuffs in general, of organic foodstuffs, of the legumes, of the specificity of albumen bodies, and of the accessory foodstuffs. In the biologic determination of diet, they discuss the instinctive choice of food stuffs, especially as between the legumes and the cereals, and the pathologic significance of this distinction. In their study of dietetic technique, they have experimented particularly with soy meal, which contains approximately forty per cent. albumin and twenty per cent. fat. Further, they have studied the biologic technology of bread preparation and have begun a biologic investigation of milk. They discuss the economic significance of their investigations and the organization and object of further experiment.

[R. M. G.]

#### PAROXYSMAL TACHYCARDIA AND AURICULAR FIBRILLATION DUE TO TOBACCO

LASLETT (*Quarterly Journal of Medicine*, October, 1921) reports two cases in which the above conditions were apparently induced by excessive pipe-smoking. In a man of 48 years, a heavy smoker for many years, frequent daily attacks of tachycardia had occurred for the space of ten days. Investigation showed paroxysmal tachycardia of auricular origin. An unusual feature was the presence of numerous auricular extra-systoles confined to inspiration, and that two attacks were observed to begin during inspiration. The attacks ceased when he cut down on his consumption of tobacco.

In a case of paroxysmal auricular fibrillation, tobacco appeared to be the cause. The condition had persisted for twelve years, when he was seen by Laslett. During the following six months, during which he did not smoke at all, he had no attacks, and had only two in the next eight years, during which period he had gradually returned to his former amount of tobacco, though smoking a milder mixture.

The author calls attention to a publication of Neuhof, who states he has seen sino-auricular block, auricular flutter and auricular fibrillation as a result of tobacco poisoning.

Laslett further reports an instance of a rare condition, paroxysmal tachycardia of ventricular origin, not, however, associated with tobacco. The auricular

rate during attacks was only half the ventricular, indicating a block in the impulses which arose in the ventricles and passed through the a.-v. node to the auricles. [W. T.]

#### SOME ASPECTS OF EXOPHTHALMIC GOITER

CAMPELL (*Quarterly Journal of Medicine*, October, 1921) presents an analysis of 127 cases of hyperthyroidism treated medically during a period of ten years at Guy's Hospital. The cases were followed for from four to sixteen years after the onset. Of the total number 110 were instances of true exophthalmic goiter, the remaining 17 were cases of hyperthyroidism, supervening in cases of goiter of long standing.

The cases of exophthalmic goiter showed the typical symptomatology of the disease. Women were affected more frequently than men in the proportion of 17 to 1. The age indicated was most commonly from 15 to 30, no cases being encountered under the age of ten, and but few after the menopause. Among women it was relatively more frequent among the unmarried, four times as many of this class being affected as would be expected from the proportion of married to unmarried among the general population. The effect of pregnancy on the developed disease was never noted to be unfavorable, and several cases improved during pregnancy. A striking feature was the frequent presence of amenorrhea, which was present in 19 of 31 cases in which notes were available on this point. This is in striking contrast to other statements in the literature; Möblus, for example, declares that amenorrhea is not more common than in other diseases. All these facts point strongly to the gonads as being an important factor in the disease, though the *modus operandi* remains obscure.

A history of chorea and mitral stenosis was much commoner in these patients than in the other hospital patients, and there was a greater liability to acute infections. An infectious origin of the disease, however, could be assumed in only one instance, in which repeated attacks of tonsillitis had occurred, and the symptoms of exophthalmic goiter receded promptly after tonsillectomy.

The symptomatology was the usual one. Fever was not uncommon in the more severe cases, either in the form of a moderate pyrexia lasting a week or two, or as sudden sharp rises of temperature lasting a few hours. Acute mental symptoms occurred in ten per cent., and were usually of serious import. Acute mania or acute confusional insanity were the most common forms. Myxedema in a partially developed form was noted in two cases.

The average duration of the disease was three years, the most acute symptoms being seen usually during the first year, which also showed the highest mortality.

The end-results were as follows: Cured, 8 per cent.; almost cured, 30 per cent.; much improved, 34 per cent.; not improved, 13 per cent.; died (of exophthalmic goiter), 15 per cent. A comparison with the end-results of cases treated surgically at this hospital showed only slightly better figures for the latter, although the immediate results were very striking. In spite of this, the author is in favor of operation, in selected cases, on account of the saving of time and the lessened danger of intoxication. It should be noted that these results were obtained some years ago, since when improvement in operative technique has lowered the mortality and improved the end-results.

The cases of hyperthyroidism differed in important respects from those of exophthalmic goiter. The average of onset was later, being 37 years, and that of the appearance of the goiter was 22 years. They showed only a few of the important symptoms, exophthalmos being noted in only 70 per cent., and seldom to a marked degree, while tremor was less frequent, tachycardia less marked, and excessive sweating and diarrhea absent. The prognosis was also much more favorable and the mortality practically nil. [W. T.]

#### THE DIAGNOSTIC VALUE OF THE SUGAR CONTENT OF THE CEREBRO-SPINAL FLUID, ESPECIALLY IN ENCEPHALITIS LETHARGICA.

COOPE (*Quarterly Journal of Medicine*, October, 1921) reviews the literature and reports the results of his own observations. He agrees with Hopkins and Von Jaksch in placing the normal sugar content at 60 to 80 mg. per 100 cc., regarding the French figure of 46 mg. as too low. The discrepancy is probably due to difference in methods. The figures seem to be from 10 to 40 mg. lower than those for the blood. French observers have reported high figures for the cerebro-spinal fluid in encephalitis lethargica and regard this finding as of diagnostic value. Coope, in 11 cases of this disease found figures ranging from 54 to 94 mg., averaging 74 mg. He found figures quite as high in a miscellaneous group of diseases without organic involvement of the central nervous system.

In acute meningitis and tuberculous meningitis, on the other hand, he found invariably a well-marked reduction of the sugar.

He concludes that a "high" sugar content is not diagnostic of lethargic encephalitis, but that a low figure, provided that the specimen is fresh and uncontaminated, indicates infection of the meninges by some organism capable of reducing sugar. This point is of special value in differentiating between tuberculous meningitis and lethargic encephalitis, for the sugar content is never much reduced in the latter disease. [W. T.]

#### THE TOTAL NON-PROTEIN NITROGEN CONSTITUENTS OF THE BLOOD IN CHRONIC NEPHRITIS WITH HYPERTENSION.

WILLIAMS (*Arch. of Int. Med.*, October, 1921) studied the non-protein nitrogen constituents of the blood in eighty-eight patients with chronic nephritis and hypertension or with myocardial decompensation. He finds that chronic nephritis with hypertension and uremia is characterized by a marked increase in the amount of the non-protein nitrogen substances in the blood and a low phthalein excretion. Chronic nephritis of moderate degree with hypertension is associated with a moderate increase in the amount of waste nitrogen in the blood and a lessened kidney function. Cardiac inefficiency without nephritis is associated with a moderate retention of the non-protein nitrogen substances in the blood, particularly the uric acid. In chronic nephritis with clinical and anatomic evidence of disease there is nitrogen retention and renal inefficiency. The presence of albumin and casts in the urine is not necessarily diagnostic of nephritis nor is their absence necessarily indicative of the non-existence of such disease. Improvement of the circulatory disturbances is accompanied by a decrease in the various nitrogenous extractives of the blood, particularly the uric acid. This suggests that at least a part of the damage done the kidneys may be a sequence of the alterations in its nutrition brought about by passive hyperemia. [L. D. C.]

#### OXYGEN THERAPY IN PNEUMONIA

BARACH AND WOODWELL (*Arch. of Int. Med.*, October, 1921) report on their studies on oxygen therapy in ten cases of lobar pneumonia and two cases of broncho-pneumonia. In eight of the lobar cases blood gas determinations were done before and after oxygen inhalation. Of these, the arterial oxygen saturation was increased in all except one; in four it was raised to the normal level. The two broncho-pneumonia cases had no arterial anoxemia; in one the arterial saturation was increased, in the other diminished by inhalation. In one of the ten lobar cases a true stagnant anoxemia was demonstrated; in four others

there was a relative lowering of the venous saturation. The difference between the arterial and venous saturation was generally normal or less than normal, indicating that a normal or increased blood flow is usually present in uncomplicated pneumonia.

The most consistent changes in the clinical condition of the patient were the clearing of the cyanosis and slowing of the pulse. The respiratory rate was sometimes slowed, the mental condition was frequently improved, the dyspnoea was not usually relieved. The effect of a single inhalation was temporary. Repeated and prolonged administration produced persistent beneficial changes in the oxygen saturation of the blood, the pulse, breathing, color, comfort and mental condition of the patient. In three patients in whom acute oxygen want followed the development of pulmonary oedema, the prolonged (one to two hours) administration of oxygen resulted in striking clinical improvement and seemed to avert a fatal outcome.

[L. D. C.]

#### OXYGEN THERAPY IN CARDIAC INSUFFICIENCY AND RELATED CONDITIONS

BARACH AND WOODWELL (*Arch. of Int. Med.*, October, 1921) studied the therapeutic value of oxygen inhalation in cases of cardiac insufficiency. They found that in a normal man the inhalation of oxygen for half an hour caused an increase in the oxygen saturation of the arterial and venous blood. The pulse was slowed but no significant changes occurred in the blood pressure, vital capacity, electrocardiogram, venous carbon dioxide content, or rate of respiration. In seven cases of cardiac insufficiency, an anoxic (arterial) anoxemia was present in all, a stagnant (venous) anoxemia in all except one. Oxygen inhalation regularly increased the arterial saturation. When the anoxic anoxemia seemed due to passive congestion and pulmonary oedema (basal) the arterial saturation was raised to normal in half an hour; where pulmonary oedema was widespread it took from 45 minutes to two hours. Inhalation increased the venous saturation in all except one case of auricular fibrillation. The arterial anoxemia of bronchitis and emphysema occurring in cardiac insufficiency was fully relieved by inhalation, and the venous saturation was correspondingly elevated. The relief of cyanosis and the slowing of the pulse were the outstanding objective changes. The electrocardiogram showed consistent changes in two cases of right fundal branch block. The patients usually said that they felt more comfortable or that their breathing was better, but they were rarely enthusiastic.

[L. D. C.]

#### OXYGEN THERAPY IN AN EXTREME TYPE OF SHALLOW BREATHING

BARACH AND WOODWELL (*Arch. of Int. Med.*, October, 1921) studied the effects of oxygen inhalation on the blood gases and on the clinical signs in two cases of lethargic encephalitis which developed a rare type of shallow breathing resulting in sudden extreme arterial anoxemia and carbon dioxide retention in arterial and venous blood. The breathing was rapid and jerky; at each inspiration the upper abdomen underwent a double convulsive contraction with a simultaneous twitching of the neck muscles but without any movement of the intercostal muscles during either phase of respiration. There was deep cyanosis and coma. Inhalation of oxygen greatly relieved the arterial anoxemia but had no effect on the steady accumulation of carbon dioxide. An uncompensated carbon dioxide acidosis was demonstrated in one case by a carbon dioxide dissociation curve. The circulation was strikingly improved at first by the oxygen inhalation as a result of the relief of the anoxemia. Later, progressive cardiac failure occurred, apparently related to the carbon dioxide retention. It is evident, therefore, that extremely shallow respiration

interferes not only with oxygen absorption but also with carbon dioxide elimination.

[L. D. C.]

#### IODINE INJECTIONS FOR SEPTIC CONDITIONS

DE CASTRO (*Ind. Med. Gazette*, October, 1921) reports good results with intravenous injections of tincture of iodine in septic infections, even in severe ones of the phagadenic type. He starts with a dose of m v in 1 c.c. normal, salt solution, and increases to mxx in 10 c.c. The injections are given in bad cases every day, in ordinary cases every second day. The changes noticed within 48 hours are marked. An unhealthy looking surface freshens up, sloughs are cast off, purulent discharges stop and healthy granulations appear. Temperature falls to normal and pain disappears. The white blood cells increase rapidly to 20,000 or more. This treatment proved especially valuable in a severe chronic gonococcus salpingitis and in an ischio-rectal abscess which had burst through the wound of an external urethrotomy. In malaria the writer found it of no value. In two instances a severe reaction followed the injection.

[L. D. C.]

#### ELEVEN THOUSAND CASES OF SPINAL ANALGESIA

MORRISON, A. A. (*British Medical Journal*, November 5, 1921) reports on the amazingly large number of 11,000 surgical operations under stavaine spinal analgesia. The advantages of this method, in his opinion, are:

1. Rapidity. By the time that the patient's skin has been painted with iodine and the surgeon has put on his gloves—say, three minutes—the patient is ready.
  2. No anaesthetist is necessary. For those 11,000 operations he was his own anaesthetist.
  3. Relaxation of the parts. A surgeon who relies on a general anaesthetic has no conception of the facility and simplification of procedure wherewith a splenectomy, a nephrectomy, a hernia, or even a haemorrhoids operation can be performed under spinal analgesia.
  4. Absence of vomiting and of shock. Frequently a patient returned to the ward after a nephrectomy will smoke a cigarette immediately.
  5. Safety from serious sequelae. In septic operations, such as gangrenous or purulent appendicitis, and in septic wounds necessitating intervention, a general anaesthetic gives rise to acetone and other forms of fatal poisoning, to heart failure, and often, he was sure, to endocarditis with dangers immediate and remote. He desires to emphasize this, for they are factors of the most serious import often unconsidered and denied by surgeons.
- In his opinion there is only one disadvantage and that is persistent headache. This he has been unable to eliminate entirely. There are other fancied objections which he does not consider to be real.

[J. B. H.]

#### EXPERIMENTAL RICKETS IN RATS

KORENCHEVSKY, V. (*British Medical Journal*, October 8, 1921) presents the results of his experiments in producing rickets in rats with the following conclusions:

1. The results obtained agree in general with the results of the experiments of Mellanby, McCollum, Simmonds, Parsons, Shipley, and Park.
2. Confinement in small cages does not evoke rickets in rats.
3. The introduction of live cultures of *B. perfringens*, *B. sporogenes*, and *B. befermentans* with the food, and of *B. sporogenes* and *B. befermentans* subcutaneously produced no visible effect on the development of rickets in rats.
4. The deficiency of the diet in calcium alone can produce changes in the skeleton of rats which present some resemblances with rickets, especially when the



young rats have originated from a mother kept on the same diet during lactation.

5. Usually deficiency of food in vitamin A produces in rats impoverishment of the bones in calcium, enrichment in water, and osteoporosis with deficient osteogenesis, and in some cases a picture resembling slight rickets. Changes in the skeleton more similar to rickets, and in some cases typical of rickets, were observed in young rats on —A diet, provided their parents had been fed on —A diet during conception, pregnancy, and lactation.

6. Vitamin A has a relation to the metabolism of calcium in the organism and particularly in the bones, and therefore to the development of rickets.

7. A few experiments on the feeding of parents on food deficient in vitamin A or calcium during conception, pregnancy, and lactation suggest that this may start disturbances of metabolism in the child which, if the deficient dietary be continued after birth, result in serious disorders of the skeleton.

8. The changes typical of rickets occur most readily and most frequently in rats kept on a diet deficient both in vitamin A and calcium.

9. Castration performed before the commencement of feeding has no marked influence on the chemical and histological changes in the skeleton of rats fed on a normal diet, on diets deficient in calcium or vitamin A, or deficient in both.

[J. B. H.]

#### ERYTHEMA NODOSUM: AN ACUTE SPECIFIC FEVER

SYMES, J. O. (*British Medical Journal*, November 5, 1921) discusses the subject of erythema nodosum. The theories concerning this interesting condition are:

1. That erythema nodosum is a manifestation of acute rheumatism.

2. That it is a cutaneous manifestation of a general intoxication due to several widely different causes.

3. That it is tuberculous in origin, a septicaemia due to attenuated tubercle bacilli.

4. That it is a manifestation of syphilis.

He concludes that "the strong points in favour of the theory that erythema nodosum is an infectious fever are the proof that it may be transferred from person to person and may occur in small localized outbreaks and in epidemic waves. Equally convincing is the evidence of a definite seasonal incidence and constant age incidence. The systematic distribution of the rash, the evidence of relapses, and the conferment of immunity are also favourable to this view. On the other hand, one has to explain the constant association of erythema nodosum with other diseases, such as tuberculosis, measles, and minor conditions of ill health.

"The heavy incidence of the disease on girls at and about the age of puberty is difficult to explain on any ground of infection, and we also have to decide whether erythema nodosum and erythema multiforme are but two phases of the same disease, or whether they are two clear and distinct entities."

[J. B. H.]

#### AN INVESTIGATION INTO THE CIRCULATION THROUGH THE LUNGS

UNDERHILL, S. W. F. (*British Medical Journal*, November 12, 1921) presents the results of the Science Committee of the British Medical Association in regard to this matter, summarizing his work as follows:

1. Ligation of the left pulmonary artery in cats (with the chest open and under artificial ventilation) causes a rise of pulmonary blood pressure of from 25 per cent. to 60 per cent.—usually about 40 per cent. There is no effect on the carotid blood pressure, pulse rate, output of the heart, or its state of dilatation.

2. The healthy heart therefore can accommodate itself without difficulty to sending the same volume of blood through one lung only in a given time, as it previously sent through both.

3. No mechanism producing slowing of the heart

from rise of pulmonary blood pressure was demonstrated in these experiments.

4. If the chest is closed after the artery has been ligatured, the animal remains in good condition—in fact, frequently its condition is improved. Its respiratory rate is usually faster than normal, frequently about double, but the depth tends to be shallow.

5. The saturation of the blood after ligation is about 75 per cent.; if the artificial ventilation is increased (within normal limits), complete saturation can be obtained. This has not been the case, however, with animals in which the chest has been closed and the artificial ventilation discontinued; in these the saturation remains at about 70 per cent.

6. Examination of the lungs shows an increased quantity of blood in the right lung, due to twice the normal volume flowing through it in a given time. The left lung after ligation of the left pulmonary artery, under artificial ventilation, contains almost no blood, except a little in the veins; on the other hand, after the chest has been closed and the animal allowed to breathe naturally, it contains usually more blood than the right lung, exhibiting a varying degree of congestion. This blood comes from the bronchial arteries and stagnates in the pulmonary capillaries.

7. Ligation of the right bronchus (in cats with the chest open and under artificial ventilation) causes a small immediate rise in pulmonary blood pressure without affecting the carotid pressure.

8. The saturation of the blood has always been under 90 per cent., even when the artificial ventilation has been increased.

9. There is, therefore, presumably still a certain amount of circulation through the right lung under these conditions.

[J. B. H.]

#### SUBDIAPHRAGMATIC ABSCESS

LOCKWOOD, A. L. (*Surgery, Gynecology and Obstetrics*, November, 1921) writes as follows:

Subphrenic or subdiaphragmatic abscess is a grave condition and causes a high mortality. The convalescence of patients who recover is long, tedious, and accompanied by serious complications, such as renal and thoracic lesions which often leave the patient in chronic invalidism.

The serious sequelae of the disease are due to the fact that the condition is not recognized sufficiently early, or is not dealt with promptly and completely.

The condition is secondary to infection elsewhere, and a high percentage of cases follows upper abdominal infection at operation or postoperatively.

Gravity accounts for the selection of the subphrenic area in the development of the abscesses following abdominal soiling.

Every effort should be made to prevent soiling of the subphrenic area during upper abdominal operations, and drainage, particularly of the upper abdomen, should be employed only when absolutely essential.

Subphrenic abscess should be suspected in all patients, who, following abdominal operations, maintain for no obvious reason, an elevation of temperature and pulse.

X-rays should be employed as an early diagnostic aid.

Needling for diagnosis is a dangerous practice, and should be used only to rule out pleural effusions. The needle should not be passed through the diaphragm into the abscess until the patient is on the operating table, then if pus is located, the needle should be left in position and the operation carried on without delay.

More deliberate and protracted operations can be performed with minimum risk to these emaciated and seriously ill patients under paravertebral anaesthesia, than under general anaesthesia.

A wide exposure of the abscess area is necessary.

Efficient drainage must be secured.

[E. H. R.]

### Book Reviews.

*The Manner of Man that Kills.* By L. VERNON BRIGGS, M.D. Pp. 444. Boston: Richard G. Badger. 1921.

This excellent volume has a double object and fulfills it admirably. In the first place it gives the detailed history of three famous criminals and their crimes, namely, Spencer, Czolgosz and Richeson, and in the second, these furnish a text in a plea for the study of the criminal and the motives which made him one, rather than the crime itself, for only in this manner can the insane criminal be understood and society protected. Dr. Briggs has accumulated and carefully analyzed an immense amount of material in the history of these three crimes, whose sensational and apparently unmotivated nature stirred the community so deeply and widely.

It is pointed out that when these three criminals are carefully studied, that they could have been prevented had the seriousness of their mental condition, in its insidious onset, been recognized early enough in the lives of these men, and measures immediately taken for their treatment and hospital care. This could only have taken place, if at the time the medical schools had made compulsory a well-planned course in psychiatry, instead of limiting the study of mental disease to a few didactic lectures and occasional visits to a hospital. Very fortunately, this state of affairs is now rapidly passing and nearly all the well-trained physicians of recent years now possess the fundamentals of psychiatric diagnosis.

In using these three cases as a paradigm for a better training in and a wider and more sympathetic social outlook on mental diseases, the author is to be congratulated both for his labors in accumulating important data and for his serious plea for education in psychiatry leading to the prevention of crime committed by subjects with mental disease. Modern psychiatry is now solving these problems by a study of early environment, of personality traits and of the conscious and unconscious forces out of which the psychoses develop. When such knowledge becomes as much a part of a physician's training as the diagnostic procedures in internal medicine, many petty and more serious offences against society may be prevented by early recognition before the disease has become incurable, in much the same way as we are able to diagnose tuberculosis in its incipient stage, without waiting for a serious hemorrhage to call attention to the underlying devastation.

*The Life of Jacob Henle.* By VICTOR ROBINSON, M.D. Pp. 117. New York: Medical Life Company. 1921.

There is nothing in literature more entertaining than a "human document," and the "human document" before us gives more than a glimpse into the varied activities and experiences of a man's life, and a very unusual man at that, from the standpoint of lasting accomplishment.

To come into contact, if even through the pages of a book, with a man whose chief teacher and most influential early adviser was the famous Johannes Muller, and among whose friends and pupils were numbered Cuvier, Humboldt, Felix Mendelssohn, Theodor Schwann, Kolliker (his prosecutor at Zurich), Wilhelm Waldeyer, and Robert Koch, for instance, is to come into a refreshing, stimulating and cultured influence. In the present essentially and boastfully "practical" age, such an experience is as memorable as it is unusual. And just such an experience is possible to the readers of this interesting story told by Victor Robinson:—for in addition to the versatile and entertaining host himself, Jacob Henle, one meets his friends and associates, his teachers and pupils, and realizes that the age in which Henle lived was an era of intellectual giants, of pioneers in the search after Nature's secrets. The story is impressively told, the first few pages being rather flippant; but when the author gets really launched in his work he exhibits a familiarity with his subject, an honest enthusiasm suggestive of personal knowledge and affection, a something more than a mere biographer is likely to get and reveal: and he carries his reader along with a sympathy that temporarily effaces self and ordinary interests. The unenlightened may resent the claim that Henle was "one of medicine's noblest figures," but after reading the ninth and concluding chapter of the book on Henle's "Contributions to Science," and realizing the vast research work, and this thoughtful, analytical, and constructive addition to medical literature, no one can resent his being placed in the foremost rank of truly scientific and great minds.

The small volume, of which there is only a very limited edition on sale, is worth more than the short evening needed for its perusal.

*Aids to Operative Surgery.* ORRIN. New York: William Wood & Co. 1921.

This book is one of a series known as the "Students' Aid Series." Operative surgery is considered in various regions, and the more important operations for each region are mentioned. A complete description of the operation is not given. However, a clear, concise outline of the chief steps in the operation makes it a worth-while book for students.

# THE BOSTON Medical and Surgical Journal

Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following named committee:

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Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in paper to articles of greater length.

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Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

## ARE TECHNICIANS PRACTISING MEDICINE?

LABORATORY technicians in some instances may be practising medicine, but have not always felt obliged to secure state registration. Even scientific workers educated in medical schools and performing technical details involving medical knowledge, and being paid for that medical knowledge, have construed the practice of medicine as dealing directly with the application of curative agents, not realizing that the results of study may be applied in bringing to bear on some case the remedial resources of medicine in its broader aspects. Even some well-informed people construe medicine as the practice which involves giving remedies or applying surgical procedures, and a common defense offered in court in some cases has been that the practitioner only gave advice and did not use drugs, or in the case of the chiropractor that he did not diagnose but simply analyzed the spine.

Recently a person, to whom had been given the degree of M.D., acting as a pathologist in a hospital, contended that since pathology dealt with the results of disease, and no living patients were studied, that it was not necessary for her to be registered. The matter was referred to the Attorney-General and the opinion rendered is herewith submitted:

"It is, therefore, my opinion that a person 'acting as a pathologist' should be registered under the law providing for medical registration."

This decision opens up the probability that other workers in hospitals or medical schools must secure registration under the Massachusetts law, or be in danger of prosecution.

## LETTER OF THE ATTORNEY-GENERAL.

Dear Sir:

I acknowledge receipt of your communication wherein you request an opinion on the following question:

"Should a person employed by the Department of Mental Diseases, for the purpose of making autopsies, reporting on findings, and acting as a pathologist, be registered under the law providing for medical registration?"

G. L., c. 112, §§ 2-12, provide for the registration of physicians and surgeons. Section 6 provides in part as follows:

"... whoever, not being lawfully authorized to practice medicine within the commonwealth and registered under section two, . . . holds himself out as a practitioner of medicine or practices or attempts to practice medicine in any of its branches, . . . shall be punished by a fine of not less than one hundred nor more than five hundred dollars or by imprisonment for three months, or both. . . ."

The Standard Dictionary defines a pathologist as "one who is learned or skilled in pathology." Pathology is therein defined as "the branch of medical science that treats of morbid conditions, their causes, symptoms, nature, physiology, and anatomy. . . . It embraces also as special departments morbid anatomy, etiology, nosology, and therapeutics."

"Medicine relates to the prevention, cure and alleviation of disease, the repair of injury, or treatment of abnormal or unusual states of the body and their restoration to a healthful condition. It includes a broad field. It is not confined to the administering of medicinal substances or the use of surgical or other instruments. It comprehends 'a knowledge, not only of the functions of the organs of the human body, but also of the diseases to which these organs are subject, and of the laws of health and the modes of living which tend to avert or overcome disease, as well as of the specific methods of treatment that are most effective in promoting cures.' . . . In order to practice medicine one need not cover the

entire field of the science. If he devotes himself to a very restricted part of it, he still may be found to practice medicine. It is a matter of common knowledge that there has been great specialization in that profession in recent years. To that effect are the decisions."

Opinion of the Supreme Court in *Commonwealth v. Zimmerman*, 221 Mass. 184.

To the same effect see *Commonwealth v. Jewelle*, 199 Mass. 558; *Commonwealth v. Parn*, 196 Mass. 326; *People v. Gordon*, 194 Ill., 560; *People v. Allcutt*, 189 N. Y. 517.

It is, therefore, my opinion that a person "acting as a pathologist" should be registered under the law providing for medical registration.

Very truly yours,

J. WESTON ALLEN,  
Attorney-General.

#### PUBLIC HEALTH OFFICIALS AND POLITICS.

THE publication in the daily papers of the purpose of a candidate for the office of mayor of the City of Boston, if elected, to remove the Commissioner of Health, was disconcerting, since, so far as has been learned, no qualifying statement was made public.

Our system of government properly gives to a mayor the power to select heads of important departments in order that an administration may be harmonious and effective, but the responsibilities of office also carry obligations to the citizens to provide that kind of service which will safeguard vital interests. Good citizenship should lead an executive to rise above personal considerations or the political exigencies when matters of public service are in the balance. The oath of office does not always seem to mean much to an official with ambitions for future advancement. It may seem utopian to expect unselfish purposes in the mind of an elected executive, but many of our voters would hail the evidence of a sense of obligation to the great problems of health.

We are not so much concerned with the individual administrator of a health department but rather with the efficiency of that branch of public service, and voters may reasonably demand that a change should be made only with the expectation of greater benefit.

Massachusetts was once blessed by an executive in the person of Ex-Governor, now Senator David I. Walsh, who said that he would not play politics with the health of the people of this Commonwealth, and in every instance when health was at stake he resolutely set himself against political interference with the admin-

istration of public health. He welcomed advice from those competent to give it and acted in accordance with the best information at hand. No one ought to prejudge an official's action and it is hoped that the health of the City of Boston and the administration of our hospitals will either be left in the hands of those already found competent to discharge the high responsibilities of these vital matters or, if a change is made, that men will be secured who give promise of greater ability.

New York claims to be the most healthful city among the large cities of the country. Boston ought to be equal to New York at least. It can be made so under a good administration unhampered by political interference.

Any one who interferes with good health administration is as responsible for disease and death as any other person who knowingly and selfishly allows his own behavior to become a menace to others. A man who leaves a stick of dynamite where it may do harm may be less blameworthy than the official who imperils the lives of people through ineffective health service. Unless otherwise demonstrated, let us hope that pre-election threats will not govern public action.

#### NEWS ITEMS.

THE RED CROSS COURIER.—Immediately after New Year's the American Red Cross will begin publication of *The Red Cross Courier*—a weekly newspaper of national circulation, which will be the official organ of the organization. This publication will take the place of all bulletins now published at National and Division Headquarters.

Authoritative articles on Service to Ex-service Men, Nursing, Health Service, First Aid, European Child Welfare and other subjects of interest to the public generally, and to members of the medical profession in particular, will appear from time to time in its pages.

Subscriptions should be sent to *The Red Cross Courier*, American Red Cross National Headquarters, Washington, D. C.

COMMITTEE ON PUBLIC HEALTH FOR 1922.—The following named members of the legislature have been appointed on the Committee on Public Health.

Senate: Pearson, of Middlesex; Hardy, of Worcester; Griswold, of Franklin and Hampshire, and Babb of Suffolk.

The House: Glazier, of Hudson; Ryder, of Middleborough; Hunnewell, of Boston; Early, of Newton; Abbott, of Andover; Hale, of Springfield; Bell, of Somerville; Kerr, of Lawrence; Bartlett, of Brockton; Kelleher, of Cambridge, and Cortanza, of Boston.



**SOME MODERN METHODS OF DISSEMINATING INFORMATION.**—During Cancer Week, Dr. Charles A. Powers of Denver, President of the American Society for the Control of Cancer, delivered a fifteen minute address into a transmitting apparatus of a telephone plant and was heard by thousands of people in the Western states, gathered in groups.

Many posters advising the people about cancer were displayed in street cars all over the country.

One speaker was transported from place to place in Nebraska by aeroplane.

Free lectures were advertised by telephone over a radius of thirty miles in one evening through the attention secured by the S. O. S. call.

**WORCESTER DISTRICT MEDICAL SOCIETY.**—Regular meeting was held at 4.15 P.M., January 11, 1922, in Red Men's Hall, Worcester, Massachusetts, 19 Pearl Street.

#### PROGRAM.

1. End-results of the various methods of treatment of surgical diseases of the stomach and duodenum, with lantern demonstrations.

Dr. A. J. A. Hamilton, Boston.

2. A discussion of the medical treatment of stomach ulcers.

Dr. Lester C. Miller, Worcester.

The papers were discussed by Drs. J. Arthur Barnes, F. W. George, and others.

J. J. GOODWIN, *Pres.*

A. W. ATWOOD, *Secy.*

**HARVARD MEDICAL SOCIETY.**—A meeting was held in the Peter Bent Brigham Hospital Amphitheatre (Van Dyke Street entrance), Tuesday evening, January 10.

#### PROGRAM.

"Back Strains," Dr. Z. B. Adams.

LAWRENCE REYNOLDS, *Secy.*

**ANNUAL MEETING OF THE MASSACHUSETTS ASSOCIATION, BOARDS OF HEALTH.**—The annual meeting of the Association was held at Hotel Brunswick on January 5, 1922.

Officers elected for the ensuing year: Pres., Capt. Wm. L. Young of Springfield; 1st Vice Pres., Dr. Geo. L. Tobey of Clinton; 2nd Vice Pres., Dr. Francis D. Denny of Brookline; Secy., Dr. Wm. H. Allen of Mansfield; Treas., Dr. Francis G. Curtis of Newton.

Dr. F. Geo. Curtis read a very comprehensive paper: "The Legal Limitations and Authority of Massachusetts Local Boards of Health."

There was brief presentation by Dr. Crossman and Mr. Cameron of the bovine tuberculosis situation in Massachusetts and neighboring states. This subject will doubtless be taken up more in detail at a subsequent meeting.

W. H. ALLEN, *Secretary.*

## THE ANNUAL STAFF MEETING OF THE BOSTON DISPENSARY.

ABOUT 75 members of the Medical and Surgical Staff of the Boston Dispensary attended the annual Staff banquet at the Copley Square Hotel on Tuesday evening, January 3rd. Dr. William E. Preble, retiring President of the Staff, presided.

The speaker of the evening was Dr. Timothy Leary, Medical Examiner of Suffolk County, who gave a most interesting address on "Some of the Experiences of a Medical Examiner."

Officers for the ensuing year were elected as follows: Dr. A. H. Crosbie, President; Dr. A. K. Paine, Vice President; Dr. P. J. Kingsley, Secretary-Treasurer.

The Medical Advisory Council of the Staff for 1922 is composed of Dr. A. H. Crosbie, Dr. A. K. Paine, Dr. William E. Preble, Dr. Henry J. Perry, and Dr. Hilbert F. Day.

Frank E. Wing, Director of the Dispensary, reported that during the past year, 161,455 visits have been made by patients to the Dispensary; 4,873 visits have been made by District Physicians to patients in their homes; and the Boston Dispensary Hospital for Children, Dr. Maynard Ladd, Physician-in-chief, has given 8,179 days' care to 1,064 children. It was also announced that additional x-ray equipment has been installed, which will provide complete radiographic and fluoroscopic facilities for patients attending morning and evening clinics, and also for private work to members of the Staff and others, at moderate rates for patients of limited means.

Very truly yours,

FRANK E. WING,  
*Director.*

## THE CUTTER LECTURES ON PREVENTIVE MEDICINE.

THE Cutter Lectures on Preventive Medicine by Charles Wardell Stiles, Chief, Division of Zoölogy, Hygienic Laboratory, U. S. Public Health Service, Washington, D. C., entitled "The Public Health Status of Amoebic Dysentery in the United States as Potentially Influenced by the World War," was delivered Tuesday, January 17, 1922, and the second, "The Underlying Principles of Excreta Disposal," on Wednesday, January 18, 1922, at the Harvard Medical School.

These lectures are given annually under the terms of a bequest from John Clarence Cutter, whose will provided that the lectures so given should be styled the Cutter Lectures on Preventive Medicine and that they should be delivered in Boston and be free to the medical profession and the press.



### TUBERCULOSIS DEATH RATE.

ALTHOUGH statistics show a decline in the tuberculosis death rate, taken as a whole, the Metropolitan Life Insurance Co. calls attention to the increase of this disease among girls between the ages of fifteen and twenty years. The ten-year period, 1911 to 1920, shows that it is in this group alone that adolescent girls show an increase in the death rate. No data relating to the cause have been secured, but the question of the entry of larger numbers of girls into industry is raised and the suggestion made that the draft on vitality at this period of life may be an important factor.

### PNEUMONIA AND INFLUENZA.

THE BOSTON CITY HOSPITAL and the Bellevue Hospital, New York, have arranged special pneumonia services which have been placed at the disposal of the Influenza Commission of the Metropolitan Life Insurance Commission. It is quite generally agreed that vaccines do not protect against influenza, but the pneumonia complications need especial study. Groups of pneumonia patients are being treated by special specific methods and an equal number of cases by expectant or symptomatic methods serving as control groups. So far there are some encouraging developments, but further statements are held in abeyance until more facts have been correlated.

### NOTES FROM LONDON.

**WHITEHALL'S LATEST SPENDING SCHEME.**—The Minister of Health has requested local authorities to submit to him a statement showing the total net expenditure which it is estimated would be incurred during 1922-1923 on the supply of a mid-day meal to expectant and nursing mothers, and of milk to infants under 12 months who are not being nursed by their mothers.

It is estimated that for the present year the sum spent on supplying milk below cost price to mothers and children will not fall far short of £400,000. The Minister is not satisfied that the milk now supplied to mothers is always consumed by the person for whom it is intended.

**LORD MOUNT STEPHEN'S BEQUEST.**—At a meeting of the General Council of King Edward's Hospital Fund for London yesterday, it was announced that the late Lord Mount Stephen had left the residue of his fortune to the Fund. Lady Mount Stephen, in her letter

conveying the news, wrote:—"It is, I believe, practically nearly the whole of his fortune, for the legacies, &c., in proportion, do not amount to anything of importance." During his lifetime Lord Mount Stephen made gifts amounting to £500,000 to the Fund.

The total amount of the grants awarded to hospitals, convalescent homes, and consumption sanatoria was £220,000, an increase of £20,000, as compared with last December.

Messages were read from the King and the Prince of Wales expressing their interest in the efforts to re-establish voluntary hospital finance, and steps were taken by the meeting to reorganize the Fund for the better performance of its new tasks.

### Obituaries.

#### LEANDER MORTON FARRINGTON, M.D.

Dr. L. M. Farrington died suddenly at his office in Manchester, New Hampshire, December 10, 1921, of heart disease, at the age of forty-eight.

The son of Jeremiah and Ellen Morton Farrington, he was born January 8, 1873, in Conway, New Hampshire, where his father was purchasing agent of the Boston and Maine Railroad. Leander had his education at the Portsmouth high school and at Harvard Medical School where he graduated with the Class of 1894, going on to serve as house officer at the Carney Hospital. He joined the Massachusetts Medical Society the year of his graduation, settled in practice in Boston and conducted a clinic in the out-patient department at Carney Hospital while serving as instructor in clinical medicine in Tufts College Medical School. In 1906 he removed to Brookline, in 1911 to Arlington Heights, where he practised off and on until January, 1917, though he was in poor health. Then he moved to Manchester, New Hampshire, where he spent the rest of his life. He was a member of the staff of Notre Dame Hospital, of the board of censors of the Manchester Medical Association. He held membership also in the New Hampshire Medical Society, the Sphinx and Calumet Clubs, in the Young Men's Christian Association and in the Joseph Warren Lodge of Masons, Boston. Although joining the New Hampshire Medical Society in 1917 he kept up his membership in the Massachusetts Society.

During the World War he served on the medical advisory board for the draft board.

Dr. Farrington is survived by his widow, Blanche E. Farrington, and by two daughters.

## JOHN ORNE GREEN, M.D.

Dr. J. Orne Green, aurist, died at his home in Boston, January 5, 1922, at the age of eighty. He had been retired for the past ten years and had devoted his time to reading and literary research.

The son of Dr. John Orne and Jane McBurney Green, he was born in Lowell, June 7, 1841. His father was senior physician to St. John's Hospital and a leading practitioner of Lowell. The son was educated in the public schools, at Phillips Exeter Academy and at Harvard, where he received the degree of A.B. in 1863 and M.D. in 1866. After serving as house officer at the Massachusetts General Hospital and studying in Berlin, Vienna, and Würzburg, he settled in Boston, devoting himself to otology, joining the American Otological Society and becoming University lecturer in diseases of the ear at Harvard in 1869. In 1876 he was advanced to instructor and two years later to clinical professor of otology, a position he continued to fill until 1904. He was visiting aural surgeon at the Boston City Hospital until 1901, aural surgeon to the Massachusetts Charitable Eye and Ear Infirmary until 1904, aural surgeon to the Massachusetts General Hospital until 1896 and then advisory and consulting surgeon to the City and to the Eye and Ear Infirmary for the rest of his life.

In his early career Dr. Green translated Schwartz's "Pathological Anatomy of the Ear"; he published "General Principles Governing Operations for Otitic Brain Disease," in 1897; "Bacteriology of Mastoiditis," in 1899; "Abscess of the Cerebellum from Infection Through the Labyrinth," in the same year; he wrote the section on the diseases of the ear for Warren and Gould's "International Text Books of Surgery," in 1890; and a chapter on diseases of the ear for DeSchweinitz and Randall's "American Text Books of Diseases of the Eye, Ear, Nose and Throat." In addition, he made many contributions to periodical medical literature. He joined the Massachusetts Medical Society in 1868 and was placed on the retired list in 1912. At one time he served as president of the American Otological Society. Dr. Green was a skilful operator, a student, and of an unobtrusive personality. He was never married.

## SUDDEN DEATHS OF THE SPARLING BROTHERS.

SASKATOON, Sask., Jan. 5.—Dr. F. G. Sparling, pioneer resident of Saskatoon, died of heart failure today in Minneapolis, a few minutes after receiving a telegram announcing the sudden death of his brother, Dr. J. H. Sparling in Boston. News of the double tragedy was received by friends of the brothers here tonight.

Dr. John Henry Sparling, who was 59 years old and lived at 144 Huntington Avenue, died January 5, 1922, of heart trouble, from which he had been suffering for the past eight years. He practised medicine up to a few hours before his death.

He was born in Ontario, Canada, son of Mr. and Mrs. James Sparling. He was graduated from the Manitoba Medical College, Winnipeg, Canada. He came to the United States over 25 years ago. He took a post-graduate course in medicine in New York and also at the Rush Medical College, Chicago. He lived in Auburn, Indiana, for two years, but for the past 20 years has practised medicine in Boston.

Dr. Frederick G. Sparling was born in Ontario 57 years ago. He was graduated from the Rush Medical College, being a student at the institution during the time his brother took a post-graduate course there. He had not been practising his profession for several years.

Dr. F. G. Sparling had been visiting at the home of his brother here during the Christmas holidays. He left for Minneapolis last Saturday.

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 Miscellany.
 

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COMMUNICATION OF F. H. McMECHAN  
RELATING TO THE COUNCIL OF THE  
AMERICAN MEDICAL ASSOCIATION.

THE JOURNAL is in receipt of the following letter and resolutions. In a recent editorial the JOURNAL tried to make the argument that the Council of the American Medical Association will reflect the attitude of the delegates provided that state societies will send men of vision and power of expression.

There are evil tendencies to be combated in every large organization, but one may reasonably hope that the Council of the American Medical Association will never be committed to policies quite so bad as those which are outlined in this circular, but if any large degree of sentiment appears to be in sympathy with dangers outlined, safety lies in eternal vigilance and effective action.

## MEDICAL ADVISORY COMMITTEE.

As the fate of the Practice of Medicine is at stake, this plea is being sent to every Medical Editor and County Medical Society in the United States. Kindly submit it at once to the leaders of your Journal for consideration and action.

TO MEMBERS OF THE MEDICAL PROFESSION:  
The Public and Profession are being sold out to—

(1) Foundation control of "full time" medical education.

(2) Lay board domination and the "closed shop" hospital.

(3) Socialized state medicine, subsidized community health centers and hospitals under political or university control.

(4) Legislative dictation of therapy and fees.

(5) Demoralization of medical standards by the expansion of cults.

(6) Exploitation of the specialties by lay technicians.

These menacing movements will succeed unless they are combated by a powerful and united opposition. Your so-called leaders are openly fostering these destructive forces, or more subtly giving them full fling by a camouflaged neutrality.

The American Medical Association belongs to you and you are entitled to have it effectively protect your vital interests. Let your action on this nation-wide referendum carry your mandate.

In the present crisis it is up to every County Society to instruct all Delegates to the American Medical Association meeting at St. Louis, Missouri, May 22-26, 1922, to vote for—

(A) A change of policy and leadership in the American Medical Association pledged to the immediate abolition of the evils mentioned, and constructive protection of medical interests.

(B) The repeal of multiple representation and plural voting privilege by Section Delegates.

(C) The election of Trustees for a period of two years; five Trustees to be elected one year, and four the next, to prevent the Trustees from perpetuating oligarchical rule.

Unless there is a drastic change in the policy and leadership of the American Medical Association the public and profession at large will continue to be misled and misrepresented in the solution of the most pressing problems affecting public welfare and the practice of medicine.

The members of the Scientific Sections are already represented by the Delegates of their respective State Societies, and the voting of Section Delegates is multiple representation, and as such undemocratic and unfair. Unless this plural voting privilege is repealed, the 15 Section Delegates will continue to negative and outvote the Delegates of 15 State Societies having only one Delegate each.

At present three of the nine American Medical Association Trustees are elected each year for a period of three years. There is a proposal before the House of Delegates, introduced at the Boston meeting (1921), to reduce the number of Trustees to seven and have the term of office seven years. Unless the proposed election of Trustees for seven years is nipped in the bud, the American Medical Association will be relegated to "gang rule" for all time to come.

At the Boston meeting of the American Medical Association (1921) those representing the rank and file of the profession lacked only 7 votes of being in control of the House of Delegates, and would have been able to initiate a policy of public and medical protection, if they had not been outvoted by the Section Delegates. In this connection the following editorial note of warning is of pertinent interest:—

... "For the benefit of the large number of State Journals that exchange with us, we desire to call attention to the necessity of determining where the Delegates to the American Medical Association stand on many questions of vital interest to the welfare of the medical profession at large. We have had examples of what some of the leaders in the profession would do to us if they have their way. It is time to know something about the attitude of those whom we send to represent us at the great parent organization, which supposedly represents the voice of a very large majority of the medical men in this country. The trouble of it is we sometimes are betrayed, and if necessary, in order to have our wishes respected, our Delegates ought to go instructed."

(*Jour. Indiana State Medical Society*, November, 1921)

This warning is all the more necessary since the Board of Trustees, at the Boston meeting (1921), reported that they had under consideration the advisability of the American Medical Association paying the expenses of the American Medical Association Delegates. This simply means further subsidizing of the Delegates to control their votes and to thwart the interests of the rank and file. Each State Society, that values representation by its own Delegates, must take action against this political maneuver.

This is your opportunity of putting your power of attorney into the keeping of only such Delegates to the St. Louis meeting, who will openly avow their stand on all vital matters, who will fight your battles and to whom your interests will be a sacred trust.

Self-protection is the first law of life. Act now!

Fraternally yours,

MEDICAL ADVISORY COMMITTEE.

(Signed) F. H. McMechan, M.D.,  
Secretary.

#### RESOLUTION.

WHEREAS the Public and Profession are being sold out to—

(1) Foundation control of "full time" medical education.

(2) Lay board domination and the "closed shop" hospital.

(3) Socialized state medicine, subsidized community health centers and hospitals under political or university control.

(4) Legislative dictation of therapy and fees.

(5) Demoralization of medical standards by the expansion of cults.

(6) Exploitation of the specialties by lay technicians.

THEREFORE BE IT RESOLVED that all the Delegates of the . . . State Medical Society to the American Medical Association meeting in St. Louis, Missouri, May 22-26, 1922, are hereby instructed to vote for—

A) A change of policy and leadership in the American Medical Association pledged to the immediate abolition of the evils mentioned, and constructive protection of medical interests.

(B) The repeal of multiple representation and plural voting privilege by Section Delegates.

(C) The election of Trustees for a period of two years; five Trustees to be elected one year, and four the next, to prevent the Trustees from perpetuating oligarchical rule.

BE IT FURTHER RESOLVED that copies of these Resolutions be sent at once to the Official Organ of the . . . State Medical Society, the Journal of the American Medical Association and the Medical Advisory Committee.

(Signed)

Passed . . . . .

(Date)

Sec'y

#### GORGAS MEMORIAL INSTITUTE OF TROPICAL AND PREVENTIVE MEDICINE TO BE ESTABLISHED IN PANAMA

Of particularly deep interest to all members of the medical profession and to all others interested in questions of public health and sanitation, is the recent announcement of the plans of the Board of Directors of the Gorgas Memorial for the establishment of a Memorial Institution in the City of Panama for research and the extension of means of prevention of tropical diseases.

Anyone who has seen the old Panama at the time of the abandonment by the French of the work of the first canal, involving so much wasted energy, the loss of thousands of lives and some hundreds of millions of dollars, could not but be struck with the present aspect of Panama, its splendid sanitation, its beautiful cities, its five hospitals, and above all, by the completion of the Panama Canal itself, making Panama one of the most beautiful and salubrious spots in the world.

It is well known to members of the medical profession that the accomplishment of this great

work and the sanitary regeneration of Panama are due to the efforts of the late William C. Gorgas, Surgeon-General of the United States Army, and to his efforts, more than to any other, success for the work must be accredited.

Coupled with his earlier work in Cuba, the accomplishment of General Gorgas in conquering yellow fever and malaria, and conclusively demonstrating the fact that health, even in the tropics, is a purchasable commodity, has sent forth his fame throughout the world. Perhaps no single life has done more for the good and well-being of humanity, and his great attachment for Panama has made the proposed Memorial to carry on the work he so ably started, the most practical tribute which could be conceived to his memory.

The honor for the conception of this idea, and of bringing it into actual existence, belongs to Dr. Belisario Porras, the President of the Republic of Panama, who in the name of his Government has tendered the site, a building, and all required equipment, valued in all at approximately \$500,000. At the request of Dr. Porras, Admiral Braisted, formerly Surgeon-General of the United States Navy, with the cooperation of others equally interested in making this Memorial possible, incorporated the Gorgas Memorial Institute for the purpose, in addition to directing the scientific work, of raising an endowment fund of five million dollars for maintenance. The following officers and directors were elected:

President, Rear Admiral W. C. Braisted, U. S. Navy (retired).

Vice-President, Dr. Franklin Martin, Secretary General, American College of Surgeons.

Directors: Dr. Belisario Porras, President of the Republic of Panama (Founder); Dr. A. S. Boyd, Chief of Surgical Service, Santo Tomas Hospital, Panama; Surgeon-General Hugh S. Cumming, United States Public Health Service; Surgeon-General Merritt W. Ireland, United States Army; Honorable John Bassett Moore, Judge of the International Court of Justice, The League of Nations; Honorable Leo S. Rowe, Director General, Pan-American Union; Surgeon-General E. R. Stitt, United States Navy.

Dr. Richard P. Strong, of Harvard University, chosen to head the Scientific Board, will be assisted by Admiral E. R. Stitt and Lieutenant-Colonel J. F. Siler. Other members of the Scientific Board will be announced at an early date.

The Advisory Board, of which Secretary of State Hughes is Honorary Chairman, consists of the diplomatic representatives of all the Central and South American countries and representative committees of the leading national medical and surgical associations, public health groups, and many Southern societies, by which Gorgas was beloved.



The proposed Memorial will be built adjacent to the new two-million dollar Santo Tomas Hospital, and the use of its complete facilities has been tendered the Gorgas Memorial to aid in the launching of the work.

The Memorial Building itself will consist of a dignified classic structure patterned after the lines of the Pan-American Union in Washington, D. C. It will house the laboratories and provide facilities for the teaching of students from the various tropical countries and from our own leading schools of tropical medicine, such as Harvard, Johns Hopkins, and the University of California.

In commenting upon the field of work before the Institute, Admiral Braisted stated that among the diseases which will be studied in addition to yellow fever and malaria, are dengue, pellagra, beriberi, leprosy, cholera, and the various mycoses. It is the consensus of opinion that tremendous advances can and will be made through the efforts of the research work in this field.

The Tropics, which are so prolific in vegetation of every kind, have been equally fertile in the development of all types and kinds of dread diseases, which tended to make them unsuited to and impossible of habitation until careful sanitation made them safe. They then can become the most desirable, the most attractive, and the most prosperous of abiding places. This very fact has made the City of Panama extremely desirable as a home for the work to be undertaken.

The humanitarian benefits to accrue from the establishment of this wonderful tribute to General Gorgas are almost beyond conception. Its complete success means the fulfillment of General Gorgas' greatest desire, that of eliminating these devastating tropical diseases, and at the same time is a fitting recognition of the world-wide importance that the Profession of Medicine played in the construction of *The Panama Canal*.

#### AMERICAN MEDICAL EDITORS' ASSOCIATION.

THE American Medical Editors' Association has been appealed to, to assist in establishing a Gorgas Memorial.

It is very essential that extensive publicity be given to this movement, and it has the hearty approval of the American Medical Editors' Association.

It is not only soliciting the aid of the doctor but the influential layman through the medical profession.

There is absolutely nothing commercial in this project, but a great scientific and humanitarian undertaking, and I am soliciting your hearty cooperation in lending the same aid in the way

of publicity as you did during the war in helping the Surgeon-General's Office secure the necessary number of men for the Medical Department of the U. S. Army.

Material will be sent to you from time to time, as the plan progresses, and I wish you would give it hearty support. Any details you may wish will be cheerfully given you, either by myself or the committee in charge.

We are particularly anxious that this information will catch your January issue.

Most cordially yours,

AMERICAN MEDICAL EDITORS' ASSOC.,

J. MACDONALD, Sec'y & Treas.

#### THE KENTUCKY MEETING OF THE NATIONAL HEALTH EXPOSITION.

THE National Health Exposition, occupying 60,000 square feet of floor space, will be held in the Jefferson County Armory, at Louisville, Kentucky, February 1-9, 1922. This is under the auspices of the United States Public Health Service, State Board of Health of Kentucky, Jefferson County Board of Health, and the Health Department of the City of Louisville. It will include exhibits in hospitalization, nursing, dentistry, medicine, and pharmacy. The University of Louisville, the public school system, and various local, state and national health organizations will participate.

The annual conference of the city and county health officers, the annual convention of the Kentucky State Public Health Association, and other health meetings are already scheduled in connection with the Exposition.

An institute will be conducted by the United States Public Health Service, and its program will include:

Dr. M. J. Rosenau, Dean of the Harvard School of Public Health; Dr. Josephine Baker, Director of the Department of Child Hygiene, New York City Board of Health; Dr. William A. Evans, former health officer of Chicago, and the most distinguished public health editor in America: George T. Palmer, President of the Illinois Tuberculosis Association and Director of the Bureau of Tuberculosis of the Illinois State Board of Health; Dr. Frederick E. Greene, Secretary of the Council on Health and Public Instruction, American Medical Association; Dr. Valeria H. Parker, Director of the Interdepartmental Board of Social Hygiene; Dr. John H. Stokes, distinguished syphilographer of the Mayo Clinic; Dr. Frankwood Williams, Director of the National Association of Mental Hygiene; Dr. W. S. Rankin, State Health Officer of North Carolina, a member of the Council of Health and Public Instruction of the American Medical Association and recently President of the American Public Health Association; Dr. John Dill Robertson,



Health Officer of Chicago; Dr. John R. McDowell, Director of Health for the Lake Division, American Red Cross; Dr. John R. McMullen, United States Public Health Service, and Miss Frances Brink, Director of the National Organization for Public Health Nursing.

A winter vacation could be profitably spent in attendance at these meetings. Detailed programs may be obtained of the United States Public Health Service or Dr. A. T. McCormack, Louisville, Kentucky.

### THE ROCKEFELLER FOUNDATION INTEREST IN MEDICINE.

In the United States there is a medical school for every 1,125,000 inhabitants. In Canada there is one for every 900,000. As regards the medical students, the proportion is in the United States, one for every 8,000 population, and in Canada, one to 3,700. The situation, however, is reversed when it comes to doctors, the proportion being one to 720 in the States and one to 1,050 in the Dominion.

It is estimated that Canada needs 300 new doctors each year. This number can easily be supplied by the existing medical schools, providing their resources are increased. It is also necessary, in Canada, as in the United States, that a way be found to distribute physicians more widely and to bring preventive medicine, hospital care, and medical and nursing service within the reach of the too generally neglected rural population.

After it had been decided which of the Canadian institutions should be aided, each of the latter was asked to prepare its own plan of future development. Towards the realization of these plans, the Rockefeller Foundation made the following contributions: to Dalhousie University, Halifax, \$500,000; to the medical school of McGill University, Montreal, \$1,000,000; to the medical school of Toronto University, \$1,000,000, and to the University of Manitoba, Winnipeg, \$500,000, which was supplemented by government grants. In addition to this, the University of Alberta, which is expanding its course from a partial to a full curriculum, was granted \$25,000, and an equal amount was accorded to the newly organized University of Montreal, which is a French Catholic institution, for its pre-medical courses. The Foundation has also made an appropriation of \$2,000,000 for medical education in Canada, the interest of which is to be devoted to annual subsidies, fellowships, etc., pending the distribution of the principal.

The world activities of this Foundation cover ten sections for malaria, twelve for county health work, six for yellow fever, one for tuberculosis, one for other health work, three for public health education. It entirely supports

one medical school, aids eleven, and five pre-medical schools. It aids twenty-seven hospitals and provides assistance for three scientific equipments and medical journals, according to published data of the Red Cross.

### AN INTERESTING RELIC.

Jan. 3, 1922.

Editor of *The Boston Medical and Surgical Journal*:

Does the enclosed Paris price list of 1839, or any part of it, have interest for the present generation? If so, it is at your disposition.

Your very truly,

W. S. BIGELOW,  
56 Beacon Street, Boston.

ADMIS À L'EXPOSITION DE 1839, MENTION HONORABLE.  
FONTHONNE,

PRÉPARATEUR D'OSTÉOLOGIE HUMAINE ET COMPARÉE  
Ci-devant Rue de l'école-de-Médecine, No. 4.  
Présentement Même Rue, 3, sur la place, en face de l'École.

SAVOIR:

*Squelettes Humains.*

D'homme dit à la Beauchêne, dont toutes les parties se détachent les unes d'avec les autres, ..... 500 "  
Pieds et mains, la paire ..... de 25 à 30 "  
Tête coupée horizontalement, verticalement et transversalement et coupe des sinus, avec les préparations de l'oreille moyenne et interne, ..... de 30 à 40 "  
Préparation de l'oreille moyenne et interne, les temporaux seuls montés sur support, ..... de 15 à 20 "

*Articulations Ordinaires.*

D'homme ou de femme ..... 100 "  
D'homme ou de femme, ..... de 50 à 80 "  
Bassin naturel de femme avec ses ligaments, ..... de 15 à 18 "  
Tête de fœtus ..... de 2 f. 50 c. à 5 50 "  
Fœtus sous un cylindre ..... de 15 à 20 "  
Tableau de fœtus désarticulé, ..... de 20 à 25 "  
Tête adulte ..... de 8 à 12 "  
Id. première dentition ..... 10 "  
Ratier de dents à jour monté sur un support ..... 18 "  
Tête naturelle tracée pour étude de phrénologie, ..... 20 "  
Tête désarticulée ..... de 15 à 20 "  
Préparation de la face de 1re et 2me dentitions, sculptée, ..... 20 "  
Tête entière avec préparation de la 1re et 2me dentitions, sculptée, ..... de 25 à 30 "

### NEW YORK MEDICAL ASSOCIATION NOT MEDICAL SOCIETY OF THE COUNTY AND STATE OF NEW YORK.

Mr. George W. Whiteside's has caused to be published a statement that there is confusion in the minds of some people as to the identity of the New York Medical Association with the Incorporated Medical Society of the County of New York and the State of New York. The only medical society that was authorized by law to adopt the name New York State Medi-

cure Association was merged by act of legislature with the Medical Society of the State of New York in 1905. Further, it is stated that Dr. John P. Davies is not authorized to issue any bulletin or to speak for either of these legally constituted societies.

#### RESOLUTIONS OF THE MASSACHUSETTS MEDICO-LEGAL SOCIETY ON THE DEATH OF PROFESSOR WILLIAM F. WHITNEY.

DR. WILLIAM F. WHITNEY was an associate member of the Massachusetts Medico-Legal Society for twenty-two years. His profound knowledge of pathology and his great skill in the application of chemistry to the purposes of the law brought him a wide field of experience and caused him to be sought frequently as a consultant. At such times he was modest, resourceful, and efficient.

A teacher of young men, he was wise, sympathetic, stimulating; an expert in a highly technical branch of medicine, he was singularly clear and lucid in its exposition; a referee in dispute involving the chance of death in another, he was calm, careful, judicial, convincing.

His kindly manner, his dignified and courtly bearing won from his associates a feeling of high regard and worthy esteem.

Then he it resolved:

That these words be adopted as the sentiment and belief of this Society.

That copies of these resolutions be sent to the BOSTON MEDICAL AND SURGICAL JOURNAL and to the family of the deceased.

GEORGE L. WEST, M.D.

A. ELLIOT PAINE, M.D.

GEO. BURGESS MAGRATH, M.D.

#### COMMITTEE ON RURAL HEALTH AND MEDICAL SERVICE.

The Committee on Rural Health and Medical Service met in Room 458 of the State House, Monday at 4 P.M., January 9th. Minutes of the last meeting were read and also a statement as to the inception and formation of the committee, and a report of the activities already undertaken was given. Considerable discussion was given as to the question of an organization composed of both the laity and physicians continuing work in fields which medical organizations, sooner or later, would enter. The present weakness of purely medical organizations was spoken of and the consequent difficulty in meeting so large and complex a problem as that of adequately and satisfactorily extending medical service to the many neglected or poorly served rural districts. The part which the laity have in hospital organization and man-

agement, in the raising of funds for buildings and maintenance was called attention to and the opinion was expressed that the coöperation of the laity was desirable in this enterprise, that a great deal of constructive effort would be needed in arousing special and general sentiment to produce the best results. Mrs. W. L. Putnam moved that the committee continue with the object of educating the laity as to the importance of improvement of medical service in rural districts until such time as the Massachusetts Medical Society is prepared to undertake the improvement of this service, and the vote was carried. Upon the motion of Mr. H. C. Parsons, it was voted that an executive committee be appointed to take the place of the finance committee. Mr. Parsons, Mrs. Putnam and Dr. A. W. Gilbert, with the officers, were appointed members of that committee. It was also felt that the membership of the organization should be enlarged. On account of the exactions of other duties, Dr. Cannon desired to resign the office of President which he has so conscientiously filled and Dr. E. H. Bigelow was elected in his stead. Meeting adjourned.

PAUL W. GOLDSBURY, *Secretary*.

#### NEW ENGLAND OPHTHALMOLOGICAL SOCIETY.

The annual meeting of the New England Ophthalmological Society was held at the Massachusetts Charitable Eye and Ear Infirmary, 233 Charles Street, Boston, on Tuesday evening, January 17, 1922, at eight o'clock.

##### PROGRAM.

1. Hospital cases.
2. Demonstration of slit lamp, large Gullstrand ophthalmoscope, telescopic lenses and magnifiers, scleral lamp, and eye microscope.

W. HOLBROOK LOWELL, *Secretary*.

#### DR. WILLIAM SEAMAN BAINBRIDGE.

UNDER date of November 29, 1921, the Bureau of Navigation received from the French government the decoration of the officer's cross of the Legion of Honor conferred upon Commander William Seaman Bainbridge, M. C., U. S. N.-R. F. During the World War, and, in addition to other duties, he worked with the allied armies at the various fronts and prepared a "Report on the Medical and Surgical Developments of the War," which was published by the Bureau of Medicine and Surgery. He was the U.S. representative at the *Congres International de Médecine et de Pharmacie Militaires*, held in Brussels, during this past summer. He has been actively engaged in the rehabilitation and reconstruction work at the Naval hospital in New York.

## BOSTON MEDICAL LIBRARY.

At the annual meeting of the Boston Medical Library held, January 10, 1922, these officers of committees were elected: President, Dr. George H. Monks; Vice-Presidents, Dr. William N. Bullard, Dr. Homer Gage, Dr. Henry Jackson; Secretary, Dr. Walter L. Burrage; Treasurer, Dr. Richard G. Wadsworth; Librarian, Dr. John W. Farlow; Executive Committee, Dr. John W. Bartol, Dr. John W. Cummin, Dr. Edward C. Streeter; Committee on Medical and Social Meetings, Dr. Malcolm Storer, Chairman, Dr. Zabdriel B. Adams, Dr. George B. Cutler, Dr. Hilbert F. Day, Dr. Frank A. Pemberton; Committee on Membership and Elections, Dr. Stephen Rushmore, Chairman, Dr. Anna Q. Churchill, Dr. Frederick A. Keyes, Dr. Richard H. Miller, Dr. Conrad Wesselhoeft.

Dr. Harold C. Ernst gave an informal talk on "Immunity" that was much enjoyed by the sixty members and guests present.

The Library has a membership of 833, is in a prosperous condition, except that the funds given to the Library provide for the purchase of books, rather than for coal, salaries and upkeep, and the building is so crowded with books and pamphlets that the other activities of the institution are hampered.

There are 110,827 books and 69,796 pamphlets in the building, all at the service, not only of the medical profession, but of any citizen of New England.

## Correspondence.

## A SUGGESTION FOR MEDICAL ORGANIZATION.

Mr. Editor:—

Will you kindly allow me to express a few ideas in the columns of the JOURNAL apropos to those of Dr. Upton in the JOURNAL of December 29th?

To my mind, the Massachusetts Medical Society should comprise all the regular practitioners of the State of Massachusetts, or as many as can possibly be induced to join it. It should be an organization composed not simply of the physicians of the cities and other large centers of population of the Commonwealth,—the men of wealth, the men of large medical practices and large medical incomes,—but it should be composed as well of men in country practice and those of small practices and of small medical incomes everywhere in the state. All reputable physicians should be encouraged to band themselves together for their personal benefit and for the benefit of the profession as a whole. These are times when numbers alone count, when working together: as can be seen by the power developed of late years by the labor organizations of the country. Clouds of ominous import to the medical profession lower on the horizon, clouds which can be dispelled only by the united and vigorous effort of physicians themselves. As stated by a recent correspondent to the JOURNAL, "Our privileges and prerogatives are being taken from us day by day. A mass of legislation which many of us consider hostile to our interests is being constantly proposed and not opposed, or feebly opposed by our alleged spokesmen. We get no help

or promise of help in these matters from our State Society or our National Society."

Let us not, then, place any impediment in the way of inducing every reputable physician of the Commonwealth to register himself as a member of the Massachusetts Medical Society.

The financial side of medicine may not seem of much importance to the physician who has inherited or married a fortune, or to one who has a lucrative practice, or one who holds a salaried position bringing him a good income, but to the rank and file of the medical profession it is a very important matter.

The annual dues of the Massachusetts Medical Society have been steadily mounting of late years. Let us not make them so burdensome as to keep out of the Society worthy men or drive out any such men already in it. If there are features in connection with the Society that certain members wish to enjoy, would it not be fairer for them to finance these features themselves rather than to force the other members to help in financing them when those members may not be in a position to take advantage of the features or would prefer to economize to that extent?

Let us labor to make the Massachusetts Medical Society not an exclusive but an inclusive society. Let the fee simply for membership in the Society be a matter distinct from any side issue connected with it—a fee purposely made nominal that it may be an inducement to all the reputable physicians of Massachusetts to join the Society and thus band themselves together for the protection and general betterment of the profession as a whole. The proposition of Dr. Upton in the December 29th issue of the JOURNAL, and of Dr. Ellison at an earlier date, that a separate association of physicians be formed in an effort to secure material advantages of benefit to the medical profession, should be construed, to my mind, as a rebuke to the Massachusetts Medical Society and to the American Medical Association as well. No such separate organization should be needed, but every effort should be made and every inducement offered to gather into the folds of the state and national societies all eligible physicians and induce them to work unitedly for the common good, financial, legislative, or other.

Every physician is, or should be, heartily in favor of scientific improvement, but let us not allow our heads to be so high in the clouds of such improvement that we fail to see the present needs of the majority of the medical profession for financial and legislative betterment.

O. C. B. NASON, M.D.

East Foxboro, Mass.

[COMMENT:—The JOURNAL is the proper vehicle for the publication of opinions of policies and criticisms of action or lack of action of the officers of the Society. The critic should, however, be very sure that the statements and arguments are fair and founded on fact.

Every member of the Society will endorse the recommendation for larger membership. The Society is a thoroughly democratic organization and is open to a poor man as much as to the rich. Some men who started life with the liability of unpaid cost of education have risen to positions of usefulness, and some wealthy men have never achieved notoriety. The opportunities for usefulness in the Massachusetts Medical Society are similar to those in any coöperative organization. Whenever a member demonstrates standing as a practitioner and interest in medical problems he is quite sure to be in line for opportunities for work. The other severe indictment of "our alleged spokesmen" is almost cruel and shows that our correspondent is not fully informed of the time and attention devoted to legislative matters by the President and members of several committees. With-

out going back into ancient history, it should be stated that Dr. S. B. Woodward gave the major portion of his time when in office to most strenuous work before the committees of the legislature and in conferences with people of influence, trying all the time to bring about understanding of public health problems and the dangers to medical practice.

In like manner, Dr. Alfred Worcester abandoned a large part of his private practice to serve on a commission and on committees and drew upon his vital reserve to a painful degree, and now our present President is going about the state discussing all matters of interest and conferring with members on the subjects calling for attention. The work done by officers of the Society does not always accomplish all that is to be desired and the disappointment sometimes seems to be because the unofficial members do not take active interest in important questions.

By all means have all interested members organized. That suggestion is valuable, but may we not accomplish more by coöperation than by criticism? After the members have organized and have agreed on plans would it not be well to tender to the committees offers of organized assistance?—EDITOR.]

### NOTICES.

**THE SPRINGFIELD ACADEMY OF MEDICINE.**—On the evening of March 7, 1922, at the Central High School Hall a public meeting, under the auspices of the Academy, will be held for the purpose of emphasizing to the laity the sound, scientific basis on which the practice of medicine rests. The speaker will be Dr. Ernest LaPlace, Professor of Clinical Surgery at the University of Pennsylvania, and a graduate of the University of Paris. He has chosen for the subject of his address, "Louis Pasteur," whose pupil he was for many years.

Members are urged to report interesting cases more frequently.

The Academy wishes to enlarge its membership. Will members please see that every eligible physician receives and signs an application blank?

The January meeting of the Springfield Academy of Medicine was held Tuesday, January 10, with Dr. Hugh Auchincloss of New York City as speaker. Dr. Auchincloss read a paper entitled "Surgery of the Hand." Luncheon was served after the meeting.

ALLEN G. RICE, *Secretary*.

**HARVARD MEDICAL SCHOOL RESEARCH CLUB.**—At the meeting of the Research Club to be held at the Harvard Medical School on Friday, January 20, at 12.30 o'clock, in the Amphitheatre of Building A., Dr. Alexander McArdle will talk on "Humidity."

### THE NEW ENGLAND PEDIATRIC SOCIETY

The seventy-second meeting of the New England Pediatric Society will be held at the Boston Medical Library on Friday, February 10, 1922, at 8:15 P.M.

The following papers will be read:

1. President's Address.  
Richard M. Smith, M.D., Boston, Mass.
2. Is there More than One Kind of Rickets?  
Edwards A. Park, M.D., New Haven, Conn.  
(Discussed by F. R. Ober, M.D., Boston.)
3. The Experimental Feeding of a Vitamin-Deficient Diet, with Especial Reference to Scurvy.  
L. W. Smith, M.D., Boston.

Light refreshments will be served after the meeting.

RICHARD M. SMITH, M.D., *President*.  
LEWIS WEBB HILL, M.D., *Secretary*.

**MASSACHUSETTS GENERAL HOSPITAL.**—The third monthly meeting of the Out-Patient Staff of the Massachusetts General Hospital will be held in the lower Out-Patient Amphitheatre at 12 noon, Wednesday, January 25, 1922. Physicians and medical students are cordially invited.

### RETURN OF THE TUBERCULOSIS PATIENT TO INDUSTRY.

DR. JOHN B. HAWES, 2d, President of the Boston Tuberculosis Association, has appointed a committee which will study the problem of finding occupations for the men and women who have had tuberculosis. The Association plans to obtain the services of a high-grade woman, whose duty it will be to get in touch with the patients before they are discharged, to find out their physical condition, their capacity for work, their former occupation, to get in touch with their former employer and to try to arrange it so that the man or woman in question can go back to his, or her, work gradually, starting with a few hours a day and working up to a full day's time. An attempt will likewise be made to get the coöperation of the leading manufacturers and employers of labor in this city and secure endorsement of this plan. The American Woolen Company has retained Dr. John B. Hawes, 2d, as consultant in dealing with the tuberculosis problem among the employees of that company.

### APPOINTMENTS.

DR. ROBERT N. NYE, formerly research assistant to Dr. F. B. Mallory, has accepted the position of Assistant Director of the Division of Biologic Laboratories of the Massachusetts State Department of Public Health.

DR. W. W. KEEN, of Philadelphia, has been elected a foreign associate of the French Academy of Medicine.

### RESIGNATIONS.

DR. HAROLD C. ERNST, Professor of Bacteriology in The Harvard Medical School, has resigned his position, to take effect at the end of this academic year.

Dr. Ernst was appointed as Demonstrator of Bacteriology in 1885, Assistant Professor in 1891, and has been Professor since 1895.

Aside from his work and influence in this school, he has always devoted much time to the problems of medical education, and has represented the Massachusetts Medical Society in important conferences.

DR. WILLIAM T. COUNCILMAN, Professor of Pathology in The Harvard Medical School since 1892, has resigned. His resignation will also become effective at the end of this academic year.

Dr. Councilman came to Harvard from The Johns Hopkins School and brought the prestige acquired through association with Professor Welch and the high standing of this institution.

### BOOKS FOR REVIEW.

THE JOURNAL acknowledges the receipt of the following books for review:—

Pediatrics—Orthopedic Surgery. Practical Medicine Series. 1921. Vol. IV. By Abt and Ryerson. Published by the Year Book Publishers, Chicago, Ill. 306 Pages. Price \$1.75.

The Sphygmometer. By William Russell. Published by Messrs. William Wood & Co., New York, N. Y. 145 Pages.

The Psycho-Analytic Study of the Family. By J. C. Fildel. Published by George Allen & Unwin, Ltd., London. 259 Pages. Price 10/6.

Attention is called to a special notice on advertising, page viii, in regard to lecturers furnished by the Boston Tuberculosis Association.